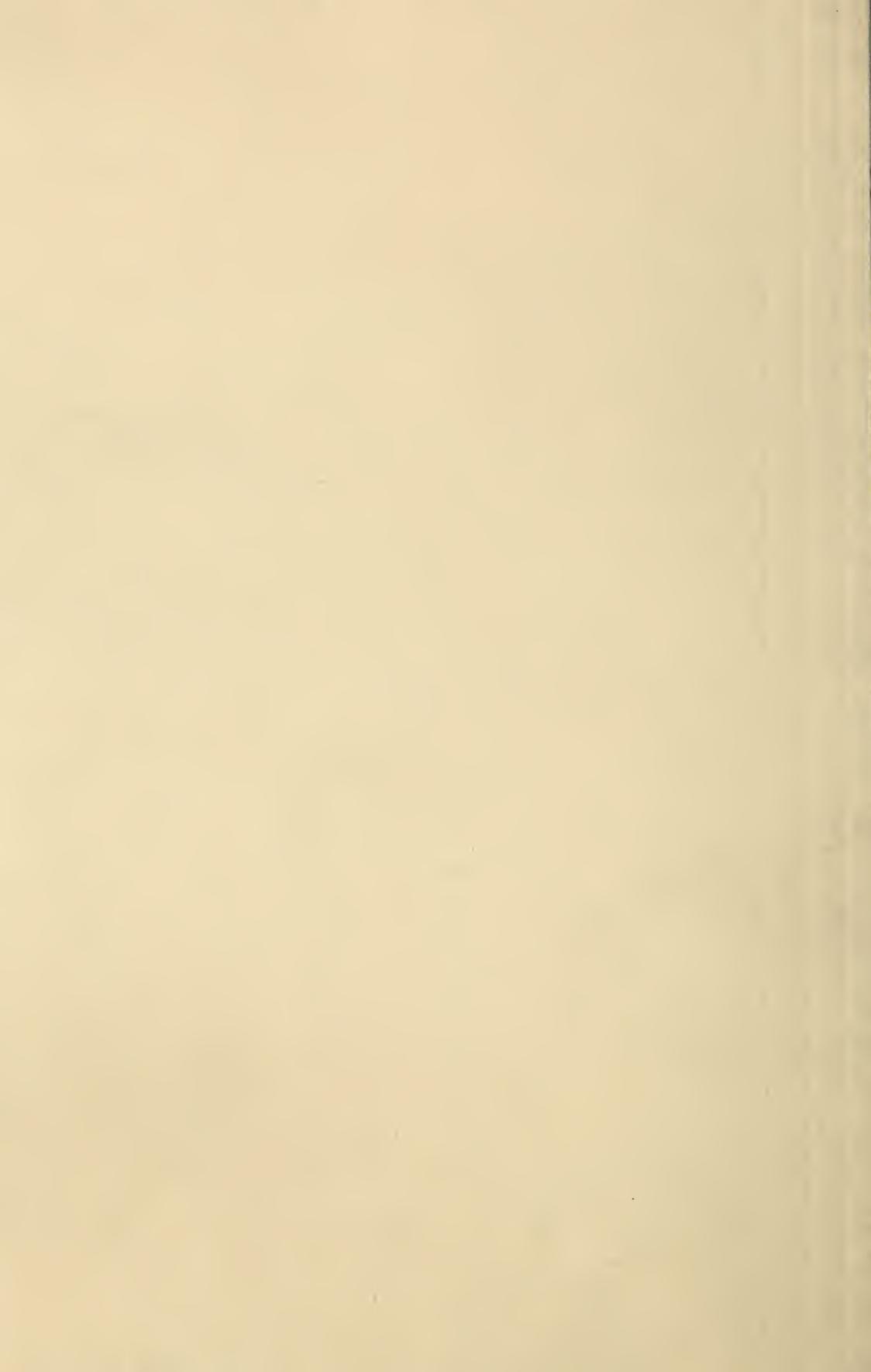


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JULY 1, 1913

Gleanings in Bee Culture

VOL. XLI.

JULY 1, 1913.

NO. 13.

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Gleanings in Bee Culture

Published by The A. I. Root Co., Medina, O.

H. H. Root, Assistant Editor.

E. R. Root, Editor.

A. L. BOYDEN, Advertising Manager.

A. I. Root, Editor Home Department.

J. T. CALVERT, Business Manager.

Entered at the Postoffice, Medina, O., as Second-class matter.

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Editorial

IN a note just received from our California correspondent, Mr. P. C. Chadwick, we learn that the Governor failed to approve the new foul-brood law, so the long fight that the California beekeepers have been going through must be fought over again in all probability. Further particulars will be given in our July 15th issue.

OUR COVER PICTURE.

APPROPRIATE to the general subject of this special number is our cover picture showing a lot of fancy and No. 1 sections. At first sight one would be inclined to call some of these No. 2's, judging from the photograph; but it must be remembered that a picture always shows comb honey worse than it really is.

HONEY-CROP CONDITIONS: CLOVER ABUNDANT AND INDICATIONS POINT TO A RECORD-BREAKING YIELD FROM IT.

REPORTS in general would indicate that this has been the greatest year for clover honey we have had for many years; but the frosty weather along in May and early June nipped the clovers in spots. Drouth has likewise checked the flow in localities in Illinois and New York. The reports of an excellent flow are particularly numerous from Ohio, and very good from Indiana, Michigan, and Pennsylvania; and in West Virginia and Tennessee the reports are from good to bad. In some localities the drouth that threatened to stop the flow of nectar altogether has been relieved by heavy rains. Good reports come from Southwest Texas, from Missouri, particularly in the Ozark region. Reports are fair from Iowa, and in the New England States the yield has been fair to excellent. In New York it was feared the flow would be a failure from drouth; but later reports indicate that the drouth has been broken, and that there is some prospect of honey yet. Reports as yet are meager from Minnesota and Wisconsin. Similarly we have heard but little

from the alfalfa irrigated regions. There is nothing to indicate, however, that the season will be below normal. Reports from California indicate that the season has been poor all over that State, with one exception, and that is from Santa Barbara Co.

Just now it appears as if this were going to be a great clover year. It is too early yet to make a positive statement; but conditions now seem to indicate that there will be a record yield from clover.

HONEY PRODUCTION AT THE MEDINA APIARIES

THESE are busy days at our Medina yard. There has been a remarkable bloom of clover, and it is still on this 25th day of June. Indeed, we do not remember a time when clover seemed to have yielded by the tubfuls as it does this season, unless it was the year when A. I. Root secured his enormous yield of extracted honey in the early 70's. It was at that time that he was proposing to build a big cistern of 100 barrels capacity for the storage of his extracted honey. He borrowed all wash-boilers and tubs in that section of the town, and had them all full. Perhaps this dream of his early days was a little wild; but it will be remembered he was only a novice then, and he continued to be Novice for several years, writing under that *nom de plume* for the old *American Bee Journal*.

So heavy has been the honey-flow that Mr. Pritchard has complained that the bees would actually clean out his grafting-eups and fill them with honey. Some one facetiously remarked that if a few tin cups could be passed around in some of the supers the bees would fill them with honey. Great scheme!

Swarming has been going on at a furious rate. Our auto truck with our gang of four men has been kept busy going back and forth putting on supers, the men shinning up trees after swarms. Even the editorial force has been called into the field. On more than one occasion the editor could have been seen up in a tree chasing after a swarm.

At one of our yards Mr. Pritchard and ourself found that cell-builders seemed bent on making us a lot of trouble. You know that cell-builders have to be kept up to a high state of prosperity. The colonies have to be extraordinarily strong; and when honey is coming in at a furious rate, and bees building cells, is it any wonder that they swarm?

At the present time it is very dry in our locality, but not dry enough to prevent a copious flow of honey; but unless we can get a good soaking rain, our crop will be cut square in two.

We hope to have some photos a little later that will show the operations here at Medina of the automobile truck in action. Say! that motor truck is proving to be all that we wished for it. It practically puts all of our eight yards together where our men can take care of them, and yet at the same time it allows us the advantage of immense fields for honey production. In this connection some of our yards have had a soaking rain, while the others, near our home yard, remained high and dry. That, again, shows the wisdom of scattering our yards. More anon.

DEATH OF ANOTHER PIONEER BEEKEEPER; A
STRENUOUS ADVOCATE OF HAVING ALL
THE CELLS SEALED BEFORE EX-
TRACTING.

OUR old friend Dan White, of New London, Ohio, died June 2. He was known to the beekeeping world as perhaps one of the most strenuous advocates of bee-ripened extracted honey. He wrote a number of articles denouncing the policy of extracting before *all* the cells are sealed. Especially did he condemn the plan of extracting before the honey is ripe and finishing the ripening in open vats.

He built up a fine local trade for his extracted honey. It was so good, he said, that he had no trouble in disposing of all he could produce, as his old customers would continue to call for it year after year, knowing it had quality.

Our friend had a unique personality. He had a strong rugged appearance and an honest face. His plan of selling was to go around to a town and give away samples of his extracted honey, saying he was not selling any thing that day. Then he would hand out a blank postal card with his name and address on it, and say to them, "If you want any of this good honey, put your name and address on this card, and when I come with my delivery wagon I will bring what you want." The next day he would get a string of postal cards that would call for

a wagonload of honey. He never had to drum up that trade any more, because the quality of the goods was his traveling salesman.

This method of selling, which has proved to be so effective on the part of others, will be advocated by the A B C and X Y Z of Bee Culture as long as we have control of it; and Mr. White's short and convincing letter in connection therewith will continue also.

THE CONVENTION AT AMHERST, MASS.

THERE was held at Amherst, Mass., on the 11th and 12th of June, immediately following the close of the apicultural school-work under Dr. Gates, a convention which in point of valuable, helpful discussion, was the equal of any meeting, National or State, we have ever attended. There were students from other States as well as Massachusetts. There were also beekeepers of prominence as well as scientific men from the college who took part on the program. Dr. Gates showed that he is a master in getting up a program, and if he has any thing to do with preparing the official program for the next convention of the National, the members of that organization may rest assured that the convention will be well worth attending.

It will be almost impossible, in the limited space at our disposal, to give any thing like an adequate and complete report of the Amherst meeting; and all we will attempt to do will be to refer briefly to some points brought out by only a few of the speakers.

We should, perhaps, state in advance that the discussions that took place in one of the college class-rooms were followed up by actual demonstrations at the college apairy and in the college bee and extracting house. The students were, therefore, able not only to take in the theoretical but the practical side of the industry at one and the same meeting. And this reminds us that more of our conventions should have more practical work—in other words, there should be facilities provided whereby the various speakers can illustrate their addresses by the things themselves. There is nothing like showing the actual operation: and we are of the opinion that those who attended the Amherst meeting came away with a very clear conception of the methods and things described.

BEE ALMOST THE ONLY AGENCY FOR POLLIN-
ATING FRUIT-TREES.

We arrived a little late for the first session, but in time to hear the address of Prof. F. A. Waugh, of the Massachusetts Agricultural College, on the pollination of

fruits. In this connection it may be well to mention that Prof. Waugh is a national authority on fruit-growing. He is the author of a practical work on the American apple-orchard,* and also a producer of fruit himself. The readers of the A B C and X Y Z of Bee Culture will remember a quotation from him on the subject of spraying fruit-trees, and his caution against applying such sprays when the trees are in bloom. We asked Prof. Waugh to give us his complete address at some future time; but at this time we may state that he gave some conclusive evidence showing that the honeybee was the principal and almost the only agent in the pollination of fruit-trees. He referred to the claim to the effect that there are other agencies than bees for doing this work, principally among which is the wind. He had taken pieces of glass, coated them with vaseline, and secured them on the windward side of fruit-trees in full bloom, at a distance that would be about equal to another tree that is supposed to receive wind pollination. He found that these glass plates, smeared as they were with grease, received almost no pollen dust, even when the wind blew through the trees in full bloom in the direction of the plates. He further stated that there are practically no insects except bees that are flying when fruit-trees are in bloom, and that nearly all the cross-pollination that is effected at all is through the agency of the bees. There are some varieties, he said, that are self pollinating; but even these varieties have more and better fruit when bees are present.

Prof. Waugh's address was all the more convincing and conclusive from the fact that he said he was not a beekeeper, never had been one, and never expected to be. His statement is especially valuable when we remember he is regarded as one of the greatest authorities on fruit culture in the United States.

ONTARIO A GREAT PROVINCE FOR BEES.

On the evening of June 11, Mr. Morley Pettit, general instructor in apicultural work at the Ontario Agricultural College, gave an exceptionally interesting stereopticon address on the subject of Ontario bee culture. His views were unusually instructive. At the close of his address it was apparent that Ontario, Canada, would rank with any State in the Union, if it did not surpass it, in the number of its extensive honey-producers and in the amount of honey annually produced. The conditions in Ontario seem to be exceptionally favorable —so much so that it is extremely doubtful

whether any State in the Union, not even excepting Texas, Colorado, Nevada, or California, can equal it. "And yet," said Mr. Pettit, "not all the available bee territory in the Province is taken up." He referred to some spots in the northern part where the seasons are necessarily short, but where the crops are good. The average Yankee could not help wishing, perhaps, that Ontario were a part of the United States.

FONDANT OR THE NEW BEE CANDY FOR QUEEN-CAGES.

On the morning of the second day Mr. O. F. Fuller, of Blackstone, Mass., gave an address on the subject entitled "Experiments with Bee Foods." Mr. Fuller has for several years past been experimenting with a soft candy that he has made use of as a substitute for the candy now made with honey in our queen-cages. Under present government regulations all honey used in candy must be thoroughly boiled to kill any possible disease germs that may be present. Mr. Fuller has been working on the proposition that it is better to have a candy that uses *no honey*. He presented a letter from the Postoffice Department showing that such a candy will be accepted and welcomed.

The candy Mr. Fuller has been experimenting with is technically known by candy-makers as "fondant." A formula that he has been using with considerable success is, granulated sugar 12 lbs.; glucose, such as the makers of candy use (not the commercial article known as karo or corn syrup), 1½ lbs., water 1¼ quarts, and from one-fourth to one-third of a teaspoonful of cream of tartar. The cream tartar, water, and glucose are put together; and as soon as they begin to boil, the sugar is added. The mixture is then stirred until it reaches the boiling-point, when it is discontinued. As soon as it reaches a temperature of 238 or 240 by a sugar-boiling thermometer made on purpose for the candy-maker, it is then removed from the stove to cool. While the ordinary stirring is discontinued at the boiling-point, Mr. Fuller stirs the mixture just enough and no more after that point is reached to keep the temperature about as uniform as possible. But a general stirring should be avoided. When the candy cools to 120 or 125, it is stirred or beaten until it begins to "cream." As soon as it looks like paste or starch it is ready to turn into the feeders. These are nothing more nor less than little wooden trays with glass slides at the bottom. These are filled with soft candy, and when cold are laid glass side up directly over the cluster of bees as a winter food. He has fed a number of colonies with this food, and found that

* Published by the Orange Judd Co., of New York, at \$1.00.

they wintered perfectly. He has also used it with a great deal of success in queen-cages, and has found that it keeps soft and moist. However, he emphasizes the importance of keeping the candy in a closed vessel, and then taking out a supply as occasion requires. When the candy is placed over a cluster of bees it will necessarily keep moist on account of the natural moisture from the cluster. Dr. Gates brought out the point that the cooking temperature will be somewhat dependent on the day. The greater the degree of humidity, the higher will be the temperature. In a dry atmosphere 236 F. will be high enough, and 238 F. on a moist day. There was a candy-maker present whose name I failed to get, who insisted that cream tartar is not necessary. On this point Mr. Fuller could not say positively; but the candy-maker said that if the candy was too moist it could be stiffened up with a little powdered sugar.

In the following discussion Mr. Fuller stated that 1 lb. of grape sugar equals 1½ lbs. of liquid glucose. In other words, 12 lbs. of granulated sugar to one of grape sugar would make a fondant.

Mr. Fuller referred to the criticism that has been raised over the use of glucose; but he argued that the amount of glucose used is very small in comparison with the amount of granulated sugar. He made the point clear, however, that he did not use glucose because of its cheapness, but because it was the best thing he had ever tried for making a soft candy that would remain soft for months.

FIELD-DAY EXTRACTING.

In the afternoon of the second day there were demonstrations in extracting with a hand-power and a large power extractor and honey-pump, uncapping with a steam-heated knife, and melting the cappings in a capping-melter. To witness these operations the members of the convention passed into the convention in single file and out as each demonstration was made.

SHIPPING BEES IN COMBLESS PACKAGES.

There had been shipped to Dr. Gates sample packages of bees without combs. The bees were on exhibition, and, later on, places in the hives, some on unsealed brood and some on frames of foundation. Dr. Gates is in sympathy with any plan for shipping bees over the country that will eliminate bee disease by the omission of comb. He gave an address on that subject at one of the sessions, which we did not hear.

A NEW OBSERVATORY HIVE.

Mr. Geo. T. Whitten, of the Hartford School of Horticulture, exhibited an obser-

vatory hive that will admit of the examination of any single comb without opening the hive. This looks like an impossibility; but seeing is believing. This will be a great hive to use at schools and colleges and by timid people who would like to watch the bees work without opening the hive. We hope to have an illustration of this in an early issue of GLEANINGS.

THE OLD "LONG IDEA" HIVE REVIVED.

Mr. A. W. Yates, one of the State deputy inspectors, of Hartford, Conn., exhibited a double-walled hive with a capacity, all in one story, of something like 25 frames. It involves the principles of the old Long Idea hive of forty years ago that was so much exploited at the time, but which was finally abandoned. Mr. O. O. Poppleton, of Stuart, Florida, however, continues to use it. As Mr. Poppleton is regarded as one of the best beekeepers in the United States, the "Long Idea" did not wholly die. Mr. Yates argued that his hive, built on that principle, required very little care. In fact, it can be managed on the let-alone principle more nearly than any other hive with which he is acquainted. He thinks that enormous crops of honey could be secured, and at the same time keep down swarming by the system of manipulation of a queen-excluder. We have asked him to illustrate and describe this method in GLEANINGS at some future time.

SOIL FOR GROWING CLOVERS.

One of the addresses that was listened to was one by Prof. W. P. Brooks on the subject of increasing clovers and honey-plants. Prof. Brooks is one of the acknowledged authorities on soils. He explained that clovers will grow anywhere if they get the soil food right. But many soils are deficient in lime; and when lime is supplied, clovers will grow profusely.

A notable feature of the Amherst meeting was a large exhibit room where supplies from many of the manufacturers were on display. There were also to be seen old hives of ancient pattern, curios, and various articles of ingenious and odd invention. This room was well occupied in the between sessions. There was something doing, therefore, at this meeting almost from morning till night.

We respectfully suggest that President Gates arrange for a field meet of the National Beekeepers' Association at some convenient date at Amherst. It has a most complete equipment, and if Dr. Gates should be authorized to get up a field meet at the college it would go down in apicultural history as one of the great conventions in the history of the Association.

Stray Straws

DR. C. C. MILLER, Marengo, Ill.

MR. EDITOR, that's a fine write-up of foul-brood legislation, p. 362. Now take up spraying, and handle it the same way some of these days.

ARE there any scales constructed for the apiary, or will any platform-scales stand the weather? [There are no scales specially constructed for the apiary; but practically all the standard instruments all of metal would stand exposure to the weather. As a general proposition scales on the gravity or steelyard principle are not as suitable for outside exposure as a platform spring scale with an enclosed dial.—Ed.]

G. M. DOOLITTLE, you've painted the swarming business very fairly, p. 367, but one thing needs to be added. It looks very pretty on paper to have a swarm with a clipped queen obliged to return and hive itself; only in a large apiary, when swarms issue simultaneously or in close succession, there are entirely too many cases where the swarm, instead of returning to its own hive, heeds the call of a returning or lately returned swarm at some other hive.

D. L. WOODWARD seems to think, p. 213, that the out-apiarist who has an auto should have horses as well. I wonder how many agree with him. [We do not believe it is necessary to own a team. That would be too expensive. But an automobile truck can do a great part of the work. The few times that a team would be required would be more economically handled by a livery. Something, of course, would depend on the roads.—Ed.]

M. R. PINCOT says, *L'Apiculteur*, 160, that brood-comb is never less than 24 millimeters (.945 inch) in thickness. The common thing here is to say it is $\frac{7}{8}$, or .875 inch. That's a difference of more than 1-16 inch. Mr. Editor, please tell us the exact measurement at Medina. [Some years ago we made some quite extensive measurements in our apiary, and the average of all measurements was as near $\frac{7}{8}$ of an inch for worker comb as it was possible to make it.—Ed.]

WESLEY FOSTER seems a little shy as to admitting that it is the proper thing to compensate a beekeeper for his loss from foul brood, p. 365. I don't wonder. Certainly it would never do to allow full compensation so long as there are men who burn down their houses to get the insurance. Indeed, there may well be question whether there should be any compensation at all, unless a man is hit so hard that he becomes

a public charge. If smallpox breaks out in my home I don't get any compensation; and why should I any more if disease breaks out in my apiary?

OTTO DENGG, *Deutsche Bzcht.*, 23, gives some interesting figures regarding the development of a vigorous colony. At intervals of ten days, at 10 A. M. he counted the number of bees returning from the field during the space of ten minutes, also how many of them carried pollen. April 1, in ten minutes he counted 318 returning bees; and of these, 94 carried loads of pollen. The other counts were these:

April 10, there were 476 bees, 142 with pollen. April 20, there were 584 bees, 268 with pollen. May 1, there were 782 bees, 281 with pollen. May 10, there were 1045 bees, 367 with pollen. May 20, there were 1462 bees, 418 with pollen. June 1, there were 2364 bees, 624 with pollen. June 5 (twelve days after first drones flew) a swarm of 8 lbs. 6 oz. issued. The per cent of bees carrying pollen at the different dates was respectively as follows: 29.6, 29.8, 45.9, 35.9, 35.1, 28.6, 26.4.

MORE and more beekeepers are getting to think bees should not be left with a space of half an inch, or even an inch, between bottom-bars and hive-floor. I first adopted a bottom-board two inches deep because I wanted the deep space in winter. But in summer bees would build down in so deep a space, so I put in a shallow box upside down to fill up the space in summer. Then I improved on that by using in summer an open rack. Now comes the Junge-Pierce team, p. 308, with a deeper space and with open sides, which ought to be an improvement, as giving still more air. Leon C. Wheeler comes next, p. 314, with exactly my bottom-board, only he has ventilation at sides and back, and has no bottom-rack. The question is, Do the bees never build down in that two-inch space? Leon, if they don't, your bottom-board is a big thing. J. P. Blunk has a deep bottom-board, open at back as well as front; and, if I mistake not, bees never build down in it. In whatever shape it is given, the deep space under bottom-bars is an important factor in helping to prevent the desire to swarm. [We arise here to inquire whether your first sentence states the facts. We would have said, basing the opinion on the correspondence that has passed through our hands, that more and more beekeepers are beginning to accept the deep space under the frames as better than a shallow space.—Ed.]

Notes from Canada

J. L. BYER, Mt. Joy, Ont.

Just now (June 5) we are having a dearth of honey, and a very severe drouth which is checking the clover badly. As blossoms are just beginning to show, naturally we are earnestly hoping for a soaking rain, without which we can not expect to get a crop of honey.

Later.—The rain came.

* * *

Dr. Miller, I want some more light on that first Straw of yours on page 140, March 1. You say that Dr. Phillips "is trying to learn what instruction to give the bees for best wintering in cellars." Please tell him for me that some beekeepers who have cellars too warm, or defective in some other way, would like to know how to "instruct" the bees to keep quiet when they get too noisy.

* * *

In June Notes I said, "The season for fruit bloom is one of the earliest on record;" but now with May just ended I must revise that and say that it was one of the latest as well. Why this paradox? Simply because, just after writing that note in early May, the weather turned cool and stayed cool all through the month. Apple-blossoms were open for three weeks, while last year they lasted but three days. Little nectar was gathered through all this period, however, owing to the chilly weather; but whenever it warmed up a bit, honey came in rapidly.

* * *

Commenting on the fact that we got 600 pounds of honey when melting those cappings that yielded 350 pounds of wax, page 379, June 1, the editor expresses surprise that there was so much honey to that quantity of "drained cappings." Perhaps it would be better to qualify the statement where I say the cappings "were pretty well drained" when the evidence points otherwise. At the east yard they had but one uncapping-box, and it was emptied each morning into the barrel after draining all night. When emptying those barrels I noticed that in the bottoms the cappings were pretty rich in honey, so that explains the more than usual amount obtained. But making all due allowance for that, I was still surprised at the amount obtained.

As to using that honey, just now it is coming in handy in feeding some colonies that are rather short, between fruit bloom and clover. It is heated to the boiling-point with about one-third as much water as honey, and makes an ideal food.

Page 216, April 1, shows two of Mr. Holtermann's helpers taking combs from the hive, one holding the comb and the other sweeping off the bees. If helping in the yard myself, I should prefer to hold the comb myself; for after the bees have been pretty well cleaned off with a vigorous shake that can be acquired only by practice, about two quick strokes of the brush will take off what few bees remain on the comb. I am quite sure that I can do this quicker and easier than with the help of an assistant; but I don't object to the other fellow carrying or wheeling the honey into the extracting-house.

* * *

To us who are accustomed to seeing "Southern extracted" honey quoted in the honey markets at a very low price, the tendency is to make us believe that all honey from the South is of inferior quality. Mr. E. L. Horton, of South Carolina, has very kindly sent me five pounds of comb honey gathered from the locust; and I wish to say it is as fine a honey as I ever sampled, both in color and flavor. It certainly has that "morish" taste; and while I was not prejudiced against Southern honey, really I never expected such a fine article as the sample sent me. In this section we once in a while get a little honey from the locust, but nothing in the way of surplus; but what little comes in the hive is decidedly dark, and strong in flavor. Does "locality" explain the difference, or is there a difference in the kind of locusts? Just as I finish writing the above, I note that friend Buchanan, of Tennessee, says that the locust is one of his best sources of honey, and that the honey is water-white, and of fine flavor—assuredly a splendid description of the honey sent me by Mr. Horton.

* * *

Major Shallard says, Dec. 15, p. 797, that a good strain of Italians will not lay above the brood-nest. If he means that, in an ordinary eight or ten frame Langstroth without an excluder being used, a queen of a "good strain," as he calls it, will not go above in an extracting-super, then most assuredly I want none of that good strain in my yards. In the past I have had some that would act just that way, judging by their record at laying eggs; and such a queen would be decapitated just as soon as her peculiarity was noticed. No, sir; in this country, at least, where rapid building-up in the spring is not only desirable but simply *imperative*, we must have

queens so prolific that they would at once skip above for more room if the apiarist did not in some way give them more room than an eight-frame Langstroth hive affords. It is needless to say, I think that all extracted-honey producers should use excluders; but that does not forbid giving a prolific queen more room than the brood-nest allows, as it is a very simple matter to hoist brood above, or give an extra story for brood-rearing till the main flow opens.

* * *

The joke is on the editor. After publicly inviting Dr. Miller to "jab" me because of my slighting the editor's pet theory, the so-called "winter nest," the said doctor ends his "jabbing" with the words, "for practical purposes the Canuck holds the safer ground." The editor having received punishment already, I will just ask Dr. Miller one question, and drop the subject for the time at least. He says, page 74, Feb. 1, "Your experiment will prove nothing, for, as ye editor suggests, the minute you stopped feeding them they began scooping out a winter nest." Now, then, doctor, please remember that it was on Nov. 7 that the said colony had all combs *solid*, and that five weeks from that date we had weather about down to zero. How much of a "nest" could they "scoop" out of those solid combs in five weeks? You know as well as or better than I do that very few stores are consumed early in the winter when no brood is in the hive; but please say whether you think enough empty comb will be in evidence in five weeks to accommodate even one quarter of the bees. Talk about overstocking the country with bees—really this matter of advising full combs in the fall would be the greatest factor toward that end that could be imagined if all beekeepers in the North who winter outdoors would follow the plan. But you needn't worry; they will not do so, as it is too much trouble, and often too big a pull on the purse—at least those are the reasons that prevent this scribbler from putting all colonies in that condition every fall.

* * *

Dr. Miller asks me to state what temperature I would prefer for a straight "five-months pull" in outdoor wintering. I don't know, but rather suspect that the *changing* temperature we have is about right, as with proper preparation bees generally winter well under these conditions. No, I do not believe that brood-rearing starts earlier outdoors because it is colder than in the cellar. Generally speaking, the best cellar for wintering bees is one in

which the bees will be very quiet all the time, and, as a rule, little brood will be in the hive when the bees are taken out in the spring. There are exceptions to this rule, of course, but that does not nullify the rule. The steadier the cold weather outdoors, the less brood-rearing there will be; so, to my mind, the cause of brood-rearing, either outdoors or in the cellar, is "activity." When the temperature is 32 or 35 in the *shade*, it will register higher in front of the hives where the sun is shining, and that condition causes *activity* and consequent brood-rearing. Moderately cold steady winter weather gives best results in outdoor wintering, especially if too big a winter-nest (ha! ha!) is not allowed, so that the danger of the colony running out of stores *above* the cluster is avoided. If the colony is none too well provided with stores, then a warm spell now and then is imperative if the bees winter at all. Often such a colony will become stranded on empty comb during a prolonged cold snap, and will starve, leaving honey at the back of the frames.

* * *

VENTILATION FOR BEES OUTDOORS AND IN-DOORS.

On page 722, Nov. 15, 1912, Mr. Doolittle lays great stress on having entrances of hives in which bees are wintering outdoors so arranged that the bees will have an abundance of pure air circulating around the cluster. While in a measure I can endorse what he says, certainly it is a puzzle to me that, in another article of his regarding cellar wintering, he virtually claims that fresh air is not needed at all in this case. Results may prove his contentions to his own satisfaction; yet I confess that it appears to me that he would have a hard time to prove these different views from a scientific standpoint. Bees will nearly always winter out of doors with the cluster immediately over or back of the entrance, no matter where the latter is, provided it has been in that shape early enough in the fall. Whether the bees cluster in such a position to protect the entrance, or for ventilation, I am not sure; but I have proved by experiment that a good colony will winter, even if the entrance is shifted to the opposite side after wintering has started. As regards cellar wintering, the majority of those who thus winter are advocates of plenty of ventilation; and I suspect that many cellars get considerable air even when it is not actually provided for in a systematic way, thus making the beekeeper think that bees inside need no fresh air at all.

Beekeeping Among the Rockies

WESLEY FOSTER, Boulder, Col.

Irrigation water is reported scarce in the Arkansas Valley; but sweet clover is abundant, and the bees wintered well, although grasshoppers are coming in fast. So far, grasshoppers are not much in evidence in Northern Colorado. A number of our Arkansas Valley beekeepers are replenishing their depleted colonies by shipping in from the South and Southeast.

* * *

THE HONEY MARKET.

The comb-honey market is practically bare. Prices range from \$3.25 to \$3.75 for clear white stock. While honey that is more or less granulated brings less, extracted honey in sixty-pound cases is worth about \$4.50 per can. There is a considerable supply of honey on hand, but in comparison with the total production it is relatively small.

* * *

BEHAVIOR OF BEES AROUND A ROBBER TENT.

Right after fruit and dandelion bloom closed it was difficult to work with bees. We had to use a tent 4 by 7 feet, without a top, and with mosquito-netting walls about 6 feet high. It is of just the right size to set over two hives so that two men can work in it together. It is amusing to see the robbers go around that tent looking for a place to get in. They will fly around two or three times in a regular swarm about two feet from the ground, and then rise in a body to the top of the tent, and some (not many) come over. They soon learn to attack the colonies after you have taken the tent away, so it is well to contract the entrances of the hives that you have looked at. After you have worked for several hours in a tent, the robbers will even attack the colonies ahead of where you are working; but by using caution we have not had any robbed out.

* * *

HONEY-CROP CONDITIONS.

Alfalfa began blooming in Oregon and Idaho the latter part of May. It is considerably earlier there on account of the low altitude. Throughout the inter-mountain West where the altitude is 4000 feet or more, alfalfa does not bloom before June, but from the first to the twentieth. A wet or a dry season affects this considerably. The wetter the season, the more luxuriant growth it makes, and the later it blooms. The price of hay is considerably lower at the present time than it has been for one or two years, and we are hoping this will have its effect on the farmers not

being in such a hurry to make the first cutting. However, I saw a mower being taken past our place the other day, so cutting the alfalfa is in the mind of some of the farmers any way. We are earnestly hoping for the time when nothing but the Grimm alfalfa will be sown. It blooms much more profusely than any other variety, and the great feature about it is that it begins blooming two weeks before it attains full growth.

June came in as a dry month. We had plenty of moisture early; but alfalfa that has not been irrigated begins to show the effects of drouth, and the sweet clover that does not have a supply of moisture at its roots is suffering.

Bees are reported in rather poor condition in the western slope. In Northern Colorado, especially around Denver, there has been less early swarming than last season; and, as compared with last year, there is much less honey in the hives June 1. In my own immediate vicinity I believe the colonies are stronger than at this time last year. White clover and what wild bloom grows on the mesas and dry land are now furnishing about enough nectar for the bees to live on. However, I am giving each new swarm a comb of honey to make sure that they will not starve.

* * *

CONCERNING HIVE-RECORDS AND EFFICIENCY.

A beekeeper was telling me one day about his elaborate hive-record system. He had all his colonies marked so that he could tell upon coming into his apiary which were queenless, short of honey, weak, which had young queens, etc. It looked good, and was quite satisfactory, but there is another point to this. System gets in the way of efficiency if you get too much of it. Some of our largest bee-men don't want a record system to last from one week's visit to the next. They want a clean slate every week. In other words, when a queenless colony is found, instead of marking it queenless, set it on top of another hive and be done with it. When a hive is weak, do the same or exchange places with a stronger one or give some hatching brood from another. Carry out this "do it now" principle and you will be surprised how little record system you will need in honey-producing apiaries. There is a difference, you know, between keeping bees and producing honey. If you are a honey-producer you do not have much time for record systems.

Beekeeping in California

P. C. CHADWICK, Redlands, Cal.

TELEGRAM: (JUNE 17).

Crop conditions unchanged; worst ever.

* * *

BEES IN EIGHT-FRAME HIVES ENTER THE SUPERS QUICKLY.

Mr. J. L. Byer, in *American Bee Journal* for February, in commenting on my recent note in *GLEANINGS* relative to the size of entrances, upsets the theory of an eight-frame hive for comb honey, and at the same time upholds the idea that the larger the hive the sooner the bees build up in the spring. He says, "By force of circumstances I have almost all sizes in common use, from the eight-frame Langstroth to the ten and twelve frame Jumbo; and every spring, *without exception*, the bees in the eight-frame hives are the last to be ready for the supers." I believe this is the first time I have ever known a writer to advance so strong a plea for a large hive; and if it were not so absolutely at variance with my own experience I would surely give it more credence. Mr. Byer, no doubt, has some reason for making such an assertion, and under some conditions he may be correct; but as a rule I am sure the eight-frame hive will have bees in the supers before a ten or a twelve frame. I have the three sizes—not many of the eight-frame, about twenty of the twelve, and those in the twelve sizes are usually the last to enter the supers; but when they do get started, there is plenty of business, and plenty of bees to carry it on. Many of our best beekeepers and heaviest producers cut their hives to one story during the winter and spring breeding season to reduce the space that is to be heated by the bees to make breeding possible. Now, if it were not considered necessary to reduce the space during the breeding season the extra work would hardly be undertaken.

* * *

PROFITS IN BEEKEEPING.

Mr. Wesley Foster asks in the May 15th issue where I got my information crediting Colorado with 27,000 colonies of bees. If I am not mistaken I got it from some printed matter sent out by our State Association; and if it is not correct it was undoubtedly supposed to be, and was perhaps the best at hand at the time. I am glad Mr. Foster has made this correction. If the 1910 census should prove to be no more reliable in Colorado than in this State there

might easily be twice the number given by Mr. Foster. He also says, "But we have some of the best beekeepers to be found anywhere, and the homes of our beemen are a credit to the State;" to which I arise to remark, "*The same here.*" But do these homes represent apiculture or agriculture? I surmise the latter more than the former, for the Colorado honey sections follow the irrigated sections closely if I am correctly informed. That is true in certain portions of this State; but the greater portion of our honey comes from the part of the State that is considered at the present time to be valueless for agriculture. Perhaps 75 per cent of the beekeepers outside of the Imperial, San Joaquin, and Sacramento valleys, live in the cities, and many have very fine homes and all modern conveniences, while their apiaries are back in the foot-hills sometimes miles from a habitation. But did they make these homes as a result in beekeeping? In some cases they did, and in some they did not. There are those who have started in the business in a very small way who have worked up, have secured good homes, and have made a good living while others have invested heavily in the business at the start and have made a failure of it. One of the best-known producers told me recently that he wished he had invested in land years ago instead of bees, as then he would to-day be a very rich man. This is no doubt true; but it must be taken into consideration that he was figuring on the increase of land values and not altogether on what the land produced.

Bees are a good investment when properly cared for. The banker loans his money for 6 to 7 per cent on realty, and considers it a good investment. He can invest, say, \$2000 in the bee business, rent the bees out for half, and about one year out of every five he will get at least 30 per cent on his investment. Two years he will get 10 per cent, or an average of ten per cent for five years, allowing failures for two years of the five. Business and professional men care little for the business outside of returns on their investment, yet we find many of them owners of apiaries, which bespeaks volumes for the industry. I believe I have given conservative figures on the average.

I invested in bees in this State nine years ago. Two years, 1904 and 1913, I stand to lose five per cent on my investment. No other year have I made less than 20 per cent, and one year I made 125.

Conversations with Doolittle

At Borodino, New York.

HIVES AND DUMMIES FOR COMB HONEY.

"I have a few colonies, mostly in boxes of all sorts and sizes, and I wish to decide on some hive for future use."

"It is easier to decide on a hive for practical use in the production of comb honey to-day than it was forty odd years ago when I started in beekeeping. At that time very many of the hives most pushed on the beginner were much too complicated. They had slides, drawers, arrangements for catching moths, etc. Then many of the hives which were practical as to brood-nest and surplus were so large as to be cumbersome. The bulk and weight of any hive to be of practical value should be as small as may be. A hive that can not be handled easily by one man when it contains a colony of bees with from twenty-five to forty pounds of stores is, as a rule, to be shunned.

"The hive must not be expensive. Forty to fifty cents should purchase enough good lumber for body, cover, and bottom-board. There are few practical hives in use that do not embody the Langstroth principle as to frame construction. A simple box made to hold ten Langstroth frames with a super to match, suitable for holding the size of sections decided upon, is, to my mind, as good a hive as one costing three dollars.

"As to painting such a hive, I leave that matter to the desire of the individual. I do not paint. Looks count nothing toward a good yield of section honey. Dampness in early spring, in the interior of any hive, counts heavily against the maximum amount of bees for the early nectar flow from white clover; and a painted hive subjects its interior to a dampness that does not exist in an unpainted one. As to the durability, if a well-covered shade-board is used, as is necessary on any hive for the best results in section honey, the unpainted hive will last a lifetime.

"Besides the ten frames for the hive, it is well to make two or three *dummies* for each. Take a log to the sawmill and have inch-thick boards cut from it of the same width as the depth of your frame. Cut these boards the same length as the frame, and nail a top-bar to each. In this way one of these dummies can take the place of any frame at any time and in any place you may wish to use it. When the flow of nectar from white clover begins, and any queen does not keep the ten-frame comb-space occupied with brood, pollen, and honey, take out the unoccupied frames and insert a dummy in place of each frame taken out. This will throw the force of bees, and the

surplus nectar obtained, into the sections *right on the start*, and practically insure a good yield of section honey; while if the bees commenced to store this first nectar in the brood-chamber, little or nothing might be the result at the end of the season.

"Then there is another time these dummies can be used to good advantage in any locality like central New York, no matter how good the queen may be. Where the June and early July honey from white clover and basswood is nearly twice as valuable, pound for pound, as that gathered in the fall, and where there is a period of thirty-five to fifty days of entire dearth between basswood and fall flowers, this matter is of first importance. From past experience and observations I put the amount of honey needed to produce one pound of brood as two pounds; and as after several weighings I find that a well-filled L. frame contains two pounds of brood, therefore it is evident that such a frame of brood costs four pounds of honey. Five such frames of brood are all that is needed to keep any colony in good strength for fall and winter; therefore, all over this is an actual waste of our highest-priced honey where the eggs are laid after the bees coming therefrom emerge too late to work in the harvest from the white clover and basswood. As the harvest from basswood closes here about July 20, and as no eggs can give bees of value in any harvest sooner than thirty days from the depositing of the egg, it is easily seen that all eggs laid later than June 20, beyond those necessary for the successful existence of the colony, can be of no value to us. Hence, where the bees of their own accord do not restrict brood-rearing down to about five *full* frames, it is economy in white comb honey to use these dummies to compel them to do so. With black and hybrid bees these dummies can be made to pay from \$150 to \$200 each year where used in an apiary of one hundred colonies; but with a good strain of Italian bees (a strain which reduces brood-rearing as the flow of nectar increases) the use of these dummies for the purpose of repressing this out-of-season productiveness is not so apparent.

"As I have written in the past, the hive and strain of bees capable of putting the maximum number of bees on the stage of action in time to take advantage of the nectar flows, and as few at all other times as are needed to carry on the colony to a successful issue the next spring, are the ones to adopt."

General Correspondence

THE GOODS AND THE GAME

Why Some Producers Can Not Get a Reasonable Profit; a Better Package Needed

BY W. S. SHAFER

On page 620, Oct. 1, 1912, is an article by R. A. Nusbaum which is very good and right to the point, except that he did not go far enough. His four points of salesmanship are well taken. I speak after having had nearly twenty years of experience as a salesman in nearly every phase of the game; but I am a "Greener" in the handling of honey. However, I think I have made good when it comes to selling it. I speak of comb honey in particular.

The great big point, it seems to me, that Mr. Nusbaum omitted, is the goods. In the first place, a salesman *must believe in his goods* if he expects to make a success in selling. A half-hearted salesman is worse than none. Now, let us start with our honey as it is in the super, and follow it through the necessary preparation that is required to make it presentable for market (the manner in which we handle our honey). After it is taken from the super it is carefully graded, following as nearly as we can the picture grading-rules as given in the *Review*. Then each section is thoroughly cleaned, making the section wood as near its original color as we can. Then each is placed in an individual container, and four sections are packed in a folding box, and the box closed, making it dust and insect tight. It also makes a very handy and attractive package. After doing this we have goods that we can believe in—goods that we know are right and the best on the market, and we are fully justified in asking a price that is from five to eight cents per section above the store price for honey, and we get it; and for the last two years we have been unable to meet the demand for our comb honey.

We will use Mr. Nusbaum's own ammunition and try to shoot it harder. If the reader will notice, "grapenuts," "Meadow Gold butter," etc., are not handled in bulk nor placed in an open box so that flies and dust, which means germs, can accumulate; but, on the contrary, are put up in handy-sized packages which are attractive, and each package is sealed so that nothing can get to it. It is sanitary and clean—just what the modern housekeeper is looking for. Now, why should the producer of comb honey be behind in the method of putting up his goods for market? I spent a day in going from one broker to another

examining honey that was shipped to Omaha. In not a single case did I find honey that had been what we call cleaned. I also looked at honey in twenty different groceries, and in two places they had honey on display in a showcase, but their surplus was in shipping cases that had been opened and were under the counter. In the other places the honey was in the shipping cases on the counter, open to every thing. Now compare the average honey to the modern food articles in the average grocery.

Our own experience has been that, if we take good care in the preparation of our goods for market, we can get from five to eight cents more per section for it. To test out my plan I purchased two cases of honey from a broker, and prepared it as we do ours, and had no trouble in getting our regular price of twenty-five cents per section. It cost me fifteen cents per section.

Some will argue that we can not wholesale it and get the same proportionate price so as to make the extra labor and expense pay us. We will answer that by giving some of our sales last fall. One large concern heard that we had a new way of putting up comb honey and wanted to see it. After seeing it he wanted to buy the entire crop; but as we had worked up a retail business that took about all, we could let him have but 500 pounds, for which he paid us 82½ cts. per box of four sections, which equals \$4.95 per case—a pretty fair wholesale price. He sold it at \$1.00 per box of four sections.

We also believe in advertising. We have prepared a little folder telling about honey, which we distribute from house to house, also taking orders at the same time. That is, we did that last year. This year the orders have been coming in so fast that we shall not be able to fill them if they keep up. We also did some advertising through the press, and sent some personal letters, a copy of one of which is given herewith.

Dear Madam:—This is the season of the year when we are gathering Nature's harvest; and among her many gifts we find that pure honey is one of her triumphs. Its delicate aroma, its smooth, velvety taste and flavor all its own make it a dish that is fit to grace the table of the most fastidious.

The appearance of a box of our *pure* comb honey immediately appeals to your sense of cleanliness. It is packed strictly in accordance with our ideas, is absolutely clean in every respect, and is backed by our reputation for cleanliness. It is absolutely pure; has never been exposed to flies, dust, nor any unsanitary conditions. It is taken from the hive, placed in a container, then four of these containers are packed in a box and sealed, making it absolutely impervious to dust, flies, or any contamination.

"To touch a man's heart, tickle his palate." Try it with a supper of hot biscuit and honey.

In these ways we have been able to work up a sale for our honey that does not leave us one section of marketable honey at the end of the season.

Some will, perhaps, argue that it is impossible to prepare their product properly because of lack of time. It does take time, but it pays big dividends. We have about 150 colonies this year.

As an illustration of what good goods well put up for market and salesmanship will do we will say that three hours' work with a sample package of honey gave as a result: Net sales, 164 lbs. No sale less than four pounds or \$1.00, from that up to \$8.00 for 32 lbs.

We believe that the producer is as much at fault as the salesman. You can not get the top price for your honey if you give it the bottom preparation for market; but if you have goods prepared in modern style, coupled with modern salesmanship, there is absolutely no reason why the average honey-producer can not get from two to ten cents per pound increase for both his comb and extracted honey.

Bellevue, Neb.

PRODUCING WHAT THE PUBLIC DEMANDS

BY WALTER M. ADEMA

As some writers have said, it is hard to tell of one's failures, and easy to tell of success. I will try to tell of both. My bee-keeping experience started in 1906 when I got my first two colonies of my brother, who sold his bees—17 colonies in all—to go into other business for himself.

My first lesson, which was dearly paid for, was in not giving a stray swarm ventilation. I hived the bees on a hot close day the latter part of May. I left them in the shade of a tree in the forenoon so that they would mark their new location after the hive was opened. But to my sorrow the bees and combs were all one mass on the bottom-board when I opened the entrance. The heat of the bees had melted down combs and all.

At first I used the double-walled eight-frame chaff hive, of which I had about a dozen, which I had bought at a bargain.

In the spring of 1909 I started out with a new equipment, consisting of the Langstroth hive, three stories high, as I wished to run for extracted honey. One of the reasons for going into extracted honey was that I was unable to sell any comb honey locally. That is one thing upon which I wish to put emphasis—if one is producing for a local trade he must first find out what the locality demands. I find that a 10-lb.

friction-top pail is best suited to my needs, as ten pounds is as much as most families will buy at one time. At first I charged \$1.00 a pail. I soon felt that I ought to realize more for my honey, but I was afraid to change as I thought I would lose some of my customers. Last year, however, I charged \$1.25 a pail, and, strange to say, my sales increased, and I had to buy a large quantity with which to fill my orders.

I always make it a practice to insert an advertisement in our local newspaper each year after extracting, and find that it pays well. Just now I have a customer living a hundred miles away whom I got through our local paper. He had ordered over thirty pails so far this season. He is a factory man, and it seems no trouble at all for him to go among his fellow-workmen and get a club order for 60 pails. That is just the trade we want to encourage. It takes time and money to get customers like this, but once in your possession they are the best you have.

As to the financial part of beekeeping, I find that it pays better than any other farm crop.

I was fighting foul brood last season, and again this season. It's discouraging, it is true; but what calling in life has not its problems?

I winter my bees in a box large enough to take in ten colonies back to back. I pack them with straw, and cover the whole with tar paper. I find that they come out stronger in the spring than in double-walled hives.

I have added poultry along with the bees, and hope some time to devote all my time to bees and chickens.

Berlin, Mich., Dec. 11.

A STEAM-BOILER FOR ARTIFICIAL RIPENING OF HONEY

BY T. BOLTON

GLEANINGS for Dec. 15, 1912, p. 801, contains an interesting and instructive communication from Mr. Hopkins, of New Zealand, on the artificial ripening of honey—atmospheric ripening we can call it. For about twenty years I have been practicing artificial ripening. I have not depended upon atmospheric conditions, but upon a small steam-boiler and appliances devised by myself. By means of these I accomplish not only the ripening when such may be needed, and by that I mean the evaporation of any excess of water, and increasing the honey's specific gravity; but my main object is to clarify or refine the honey to make it amenable to rapid tanking, and to do

away with the old unscientific mess and bother of strainers and cloths.

The honey runs directly into the appliance from my extractor, which is driven by a small steam-engine. A $\frac{3}{8}$ -inch pipe takes steam into the jacket of the ripener, and on its way through it the honey is heated, refined automatically, separated from the scum that rises freely in the process. It is then pumped by the same power into the tanks. The next morning it is fit to draw off into 60-lb. cans, and will then keep uncandied after this process for two years or more; whereas if put into tanks in the ordinary way, cold and strained, it has to be drawn off within a few weeks or it will have to be dug and chopped out (certain varieties).

This once happened to me when I left a square tank of 5000 to 6000 lbs. of honey in midsummer newly filled. I went away for a few weeks, and came back to find that only the outer part of the honey was available by way of the tap, and the center was a huge pyramid, a mass of candy. For a week or more two boys had to get into the manhole of that tank, dig out the honey into dishes, and pass them to me to melt. I don't know how many chisels, trowels, and wooden paddles, improvised for the occasion, were bent or broken in the job. I might say that half of the tank was protruding outside into the sun's heat—my idea of the ripening process then being thus to cause a circulation in the tank through one side being hotter than the other.

After a few years I adopted steam heat in different experimental ways, till I have now a satisfactory appliance which saves both labor and time.

One reason why honey thus treated is not so ready to granulate is because such a large amount of presumably pollen grains and wax particles are removed, and cease to act in the bulk as centers or nuclei around which granulation gathers.

In one part of the apparatus the skimming is coarse and largely wax; in another finer, and largely pollen. The former is removed to the uncapper to be melted, the latter I am carefully preserving in 60-lb. cans for the next term of pollen drouth that comes along, and so seriously cripples our bees. I hope it will settle the trouble of feeding an artificial pollen, which hitherto we have sought for in vain.

There is always one drawback to any method of artificial ripening of honey depending on exposure to atmosphere for its effect. The exposure surface is large necessarily, and it is as large for the absorption of moisture as for heat and evaporation of it. Weather changes make it possi-

ble to lose one day what was gained the previous. This makes it a slower process still. But not only so, but the surface in its relation to the bulk or contents is large too, for the collection of dust; and over here we have dust storms that have great wall and roof penetrating power. Finally, the heat applied on the surface keeps the top layer warm, consequently lighter, and it stays on top. The colder layers that we want to rise in succession to be in turn warmed and dried are kept below. In short, circulation and air exposure are checked. But apply the warmth underneath, and what a difference in time taken and in the result!

Hamilton, Victoria, Australia.

HONEY NOT GETTING A FAIR SHOW IN THE STORES

BY L. RIEBEL

In my travels and in giving demonstrations with bees at fairs and at exhibitions of different kinds, it always annoys me to hear people call all kinds of liquid honey "strained honey." Many times, when there is a good display of extracted honey, people will call it "strained honey," when there is much difference between the two. Whenever I have a chance I make it a point to call at some of the largest groceries in the city where I happen to be and look up the honey proposition, I frequently have an experience like this:

In talking to one of the head clerks or the proprietor I inquire whether they have any honey, and learn that they have section honey and strained honey. I state that I should like to look at it, and almost invariably find some extracted honey gotten up in good shape. I then explain the difference between strained and extracted honey; but if a customer comes in and asks for honey while I am still there, the clerk or proprietor to whom I have been talking says that they have *strained* honey.

I think that the merchant himself is largely to blame for not informing himself on the different kinds of honey just as he would on other goods.

CARELESSNESS IN DISPLAYING HONEY.

The independent and careless ways of merchants in putting comb and extracted honey before their customers is to be deplored. In a large store in a town of 30,000 I once saw eight single-tier cases of comb honey—fairly nice-looking honey—in $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$ sections, piled up, four cases on top of each other, and the lower case on the floor, with the glass broken. Some one had shoved the toe of his shoe through

the case. You could see the prints on the section of this same case. Another case showed marks left by the broom as it had swept along the floor. At one side there was a basket of potatoes; on the other side, half a barrel of pickled tripe. Both upper-tier cases were open, and about half full of sections, some of which were lying flat, some edgewise, some crosswise, more like potatoes in a basket than honey. Many of the sections showed thumb and finger marks, and were badly stained. This, mind you, was what was considered to be a "swell" grocery—in fact, the best store of the kind that I visited that season.

Then, again, I have stepped into a grocery where the farmers were bringing in comb honey in supers. The merchant would take it and set it on the counter just as they left it. It was evident that no separators or starters had been used, and sometimes the honey was in old sections, which were then second-hand. The honey bulged in all kinds of shapes, and such a mess as the clerks and merchants would make in getting it out! I place the blame on the merchant for accepting honey in that shape. Is it any wonder that honey has to take a back seat, and does not move off in the local market as do other goods?

There is one thing I can not understand: Why merchants who have made grocery-keeping a business, and take pride in keeping other goods neat and attractive, should give honey such a black eye. They would not dare to treat butter or other commodities that way or they would soon lose their butter trade.

It is surprising to know how little people in general know about the bee and the way in which honey is made. What a field there is to labor in! I am doing what I can to educate people as I have opportunity, and most of them seem to appreciate it. I think this matter should be brought before the merchants in some way, either through the columns of the newspaper or through little pamphlets which will interest them until they will take at least the same interest in honey that they do in other lines of goods.

Chariton, Iowa.

ADVERTISING UNTIL THE CUSTOMERS COME
TO THE HOUSE

BY GEO. SHIBER

On p. 632, Oct. 1, 1912, I find a very readable article by Mr. C. W. Powell on organization by beekeepers for the purpose of better disposing of honey. I have no doubt that organization is a good thing;

but I am sorry to see him bolster up his argument by saying, "A rocking-chair for which you pay the dealer \$5.00 costs him \$1.50;" and "carpets selling at retail for fifty per cent profit." That would be too far "up in the air," for the Eastern States at least.

Now let us consider for a moment the question of the best way of disposing of a crop of honey. Mine is all extracted. There are two or three things that are very necessary for selling direct to the consumer. I am not going to say any thing about putting it up in 60-lb. cans and bringing to a honey-buyer. That's easy, but it doesn't bring as much cash.

The first important thing is to have your product fancy, all sealed.

Second, put it up in packages of about ten or twelve pounds, and some sixty-pound cans. Draw it off in these packages, just as fast as you throw it from the combs. Have the honey-tank emptied every night. The sooner you can seal up honey air-tight after the combs are taken from the bees, the better. This is one thing I feel that I know about beekeeping.

The next thing, let people know you have it for sale. The cheapest way I have found is a reading notice in the town paper like this, run very week until the crop is sold:

HONEY.—I could fill this paper with letters and words of praise I have received in regard to its quality. I have it in gallon tin cans and five-gallon tin cans.

SHIBER'S APIARY.

Canvassing? I never canvassed a minute in my life—people come after it.

Perhaps you may think a little may be sold this way, but not a crop that goes up into the tons. Well, year before last was a very poor one, and nearly 4000 lbs. was sold before Thanksgiving. Last year, with a crop of 8000 lbs., it was nearly half sold by Oct. 1. We sell gallon cans at \$1.45; two-quart glass jars at 85 cts.; one-quart glass jars at 45 cts. At those prices it is a cheap food. Why, last year one man bought four one-gallon cans, and after New Year's day he was asking for another can, but it was gone.

MERE PUBLICITY OF NO AVAIL.

I want to say that the reason why it is hard to sell honey from one's home direct to the consumer is because very few people know he has it for sale. Oh, yes! I know the local apiarist has the reputation of being a beeman, and whenever he gets into a crowd or goes into a store the hangers-on usually try to start some bee-yarn about a bee-tree that "Abe Baldwin cut once," and how the speaker "didn't get stung once," etc.; or to have the reputation of "going out to hive a swarm of bees without any

Continued on page 463.

ADVERTISING HONEY WITHOUT EXPENSE

BY JAY SMITH

Beekeepers as a rule do not realize what an advantage they have in the way of securing free advertisement—not only free, but, if properly managed, one can get pay for advertising his own business. We beekeepers study the mysteries of the bees, and discuss them among ourselves through the medium of the bee journals until to us they are commonplace. The rank and file of the honey-consumers never get to know of the marvelous things of interest concerning the bee and its works. It is "up to us" to



A similar picture of Jay Smith has appeared in hundreds of magazines all over the country.

give them, through the newspapers and magazines, live, interesting sketches of the bee and honey industry. They like anything unique, original, and interesting to the public. Of course a person must not give the articles the appearance of advertising or it will "queer the game." It is not necessary to say that you have honey or bees to sell. If you have bees they will know that you have honey. I have frequently noticed the surprise of people when I tell them that I produced a ton of honey. The word "ton" seems much bigger when applied to honey than does 2000 pounds. So does "half a ton" or a "quarter ton." It probably seems big to them because they were familiar with it only in spoonful lots when colds were prevalent.

Then, again, the public can not get away from the belief that the principal business of the bee is to sting—that the sting is something awful, and that, if you go near a hive of bees, you are taking your life in your hands. Some of the common stunts that are pulled off among the beekeepers would amaze the public.

One of the most successful things I ever did in the way of advertising was by the use of the accompanying cut. If I could call for a show of hands as to how many readers of *GLEANINGS* have seen this picture thousands of them would respond. I made this photo last summer more for the fun of the thing than for any thing else. I made several negatives, and sold one of them to Underwood & Underwood. They must have made a good thing out of it, for it is still running in papers and magazines all over the world. Scarcely a day goes by but some one brings to me a paper in which he has discovered my picture. One saw it in *Harper's Weekly*; another in the *Chicago American*; another in the *St. Louis Democrat*, and another in a supplement to a Sunday paper. I have heard of it from Los Angeles, Cal. From Texas a paper came from a relative with the bee picture in. The president of our university attended the inauguration of President Wilson, and while there he mailed me a New York paper with my bee whiskers in. (Underwood & Underwood give it the dignified name of "Bee Beard.") From far-away Idaho comes word from our friend Geo. W. York that he saw it in a paper. I mention this to show how the public is interested in any thing unique in the bee line.

I do not know how much good this has done me in the way of selling honey; but I do know that I have sold more than twice as much honey this year as in any previous year.

Vincennes, Ind.

SELLING HONEY BY THE CARLOAD IN ARIZONA

A Brief Mention of Some of the Men who do it

BY WM. LOSSING

One of my customers, Mr. Peter H. Benson, of Palo Verde, has sold me two car-loads each year for the last two years. He is a farmer making the bees a side issue (a rather good-sized issue). His equipment consists of 500 colonies divided into three apiaries. At each apiary there is installed a six-frame automatic power extractor and a 1 $\frac{3}{4}$ -power engine which is conveyed from one yard to another. He also has a pump,



Loading the largest car of honey ever shipped out of Arizona. Fairground siding, Phoenix, Oct. 4, 1912.

steam honey-knives, Hatch wax-press, and settling-tank having about 200 gallons capacity. The buildings consist of up-to-date honey-houses, finest of sheds, and a galvanized warehouse 20 x 30.

The hives deserve special mention. The Hoffman frames have long molded top-bars, and are wired and fitted with full sheets of foundation. The hives are of the ten-frame size, and are made of redwood. There are 500 wire queen-excluders and 100 bee-escapes. At each yard is a Daisy wheelbarrow, and some smokers and veils. The bees are the result of much care and judgment, which is plainly shown by the uniform markings of the Italian bees.

Mr. Benson is practically a new man in apiculture, and a fair sample of many instances near Phoenix where new beemen have sprung up, as it were, and budded, bloomed, and bore fruit in one night.

The illustration shows the largest car of honey ever shipped out of Arizona. It was loaded at the fairground siding, Phoenix, Oct. 4, 1912, and was one of 16 cars shipped by the undersigned, an independent shipper. This amount is about half of the honey produced in the vicinity of Phoenix, including Buckeye and Palo Verde, Ariz. The car is the product of beginners, one of which, whose check amounted to over \$1200, is J. J. Myers, of Phoenix, who never sold

a pound of honey before, last year being his first. In the picture four of his teams are shown, and Mr. Myers himself is sitting in the foremost wagon, as dignified to all appearance as a full-fledged apiarist.

John H. Bennett, another new shipper, is managing about 500 colonies. His check was not quite as large, he having retailed a great deal of his honey in the city. His outfit seems to be about as near up-to-date as any of them. He has a migratory honey-house equipped with a four-frame automatic extractor, gasoline-engine, and other implements necessary for carrying on his successful operations. Much is predicted of John.

Among the other new beemen of the past few years I wish to mention a few of the principal ones. Albert J. Ross, of Buckeye, is cutting a wide swath in the line of apiculture. Two years ago he bought 600 colonies on time. That fall he paid from his honey money about half of his indebtedness. Last fall he sold enough honey (nearly two carloads) to put him out of debt and place him in good running order for the next year, such as buying a small tract of land, building a new house, and taking unto himself a helpmate. The writer be-speaks great success for Albert.

One James H. Tracy, Buckeye, who has been in the bee business for several years,

has demonstrated beyond a doubt the profits that can be made in the bee business in Arizona. The last three years all his honey put together would total about nine car-loads. These carloads of honey range in cash from \$1600 to \$3000 per car, regulated somewhat by the amount and price in the car. Mr. Tracy has a nice little home, out of debt, 700 or 800 colonies of bees, a good horse and buggy, and money in the bank. The one improvement that I would suggest would be a nice wife; then Jim would surely be on the road to happiness and prosperity.

If this article does not find its way to the waste-basket I shall be pleased to finish the report, as we have many beginners who are worthy of mentioning, a few of whom I will simply name for the present: Wm. Doner, Walter Dickerson, Levi J. Holtzworth, Mrs. L. D. Smith, Mrs. May G. Lovett.

Phoenix, Ariz.

HONEY-SELLING VIEWED FROM A STORE-KEEPER'S STANDPOINT

Wrapping Each Section in Transparent Paper Tied with a Silk Thread, and Selling for a Fancy Price

BY C. B. PALMER

Shall we improve the style and appearance of the section of honey, and keep pace with all other packages of merchandise now handled in the grocery or general merchandise store, and receive a better price for our improved package? Or shall we continue to place our sections on the counter in the same old way we have done for years, and then wonder why our honey brings no better price than it did last year or the year before, or, in fact, than it did fifteen years ago? and also why there is not an increasing demand? I doubt if there is a food in our store, the style of package of which has not been improved on in the past few years. We must cater to the demand.

Back in the seventies, when as a boy I was drawing wood into old Kalamazoo, father would sometimes say, "Take a grain-sack along and go to the bakery and bring a dollar's worth of little round butter-crackers, always so fresh and crisp."

Go to your store now and ask for a dollar's worth of crackers. You will be lucky if you get five packages, and on one end of each package will be marked in very small type, "This package contains twenty-nine ounces of crackers." But see the elegant, bright, pretty package. Some one has seen fit to cater to the demand of the trade, and you can scarcely find a family to-day

that does not keep crackers constantly in the house.

A glance over the shelves in my store tells me that the old method of handling honey must go. The method is so crude and so antiquated that the food commission had to compel us by law to carry our honey in glass show-cases or other suitable covering. Sections of honey are much easier to enclose than many other packages of foods, especially dried fruits or foods that contain oils, or any food that the moth miller can reach.

I can count more than fifty different packages of goods put up in the most attractive forms possible. These were all handled in bulk only a few years ago. But should I order a case of honey it would come in the same old mussy leaking condition. No wonder that merchants do not try to create a demand for this class of goods. It is up to the producer to increase the demand.

One of the most attractive packages I have is a three-pound rice. I have this same rice in bulk in a dish on the counter, marked five cents a pound, but no one wants it. It does not attract the buyer's attention. It is the old-style method of showing goods, and customers are looking for something new. Consequently they take the three-pound package at twenty-five cents, and are pleased. The producer of the beautiful gilt package has increased the selling value of the package, and at the same time increased his own profits as well as mine.

The large producer of honey has no trouble in finding a market, as he has made a study of the demand and knows how to supply it. It is the man with only a few pounds or a few hundred pounds who becomes discouraged and soon drops out for lack of a market for his few pounds of surplus. When I found myself in this position I began to look around for a market. I found every store supplied with honey, from honey one day old (the merchant had lost a stand from disease, and he was pressing the honey out of old filthy combs into glass fruit-jars), to honey so old that "whiskers" were growing on the sides of the case. Some of the honey looked like some of my own, especially that with the "whiskers;" but all, good or bad, was in $4\frac{1}{4} \times 4\frac{1}{4}$ sections.

I decided that, in order to sell my honey and make a demand for it, I must first change the shape of the package so that the customer would not be looking at the same old mussy, grimy, dusty section, and I decided to overhaul all my supers and produce nothing but 4×5 sections. Then I would see how nice I could put them up

for the trade. All the time my thoughts were to cater to the trade, leaving the price to take care of itself, if I created the demand. As a result, for the past few seasons our honey has been sold up a year in advance, and for three years we have not had honey to retail from our own store.

SHIPPING SMALL AMOUNTS OF COMB HONEY,
FROM A FEW SECTIONS TO A FEW
THOUSANDS.

I use a common candy-pail, which is charged up to the customer. He can always sell the empty pail or return it for credit. The pails can be procured in any size. I use one 11 inches deep and $12\frac{3}{4}$ inches across the top, inside measurement. It holds thirteen 4×5 sections in the bottom layer and fifteen in the top, twenty-eight in all.

To pack the pails, twist some *clean white* paper into ropes and crowd between the inside of the pail and the sections. Care must be taken not to crowd the face of any section. However, no one but a careless packer can do this, as the wood comes nearest to the pail at all points. Crumple more paper and fill the top of the pail and place



Wooden candy-pail for shipping comb honey. A shipping case that is proof against honey breakage.

the cover on. There are two small wires that bend over the cover. Put a common nail in the loop, twist the wires together, and the pail is sealed better than any nails could do it. The pails are all painted white,

GLEANINGS IN BEE CULTURE

and marked on the top "Comb honey. With Care." Braided cornhusks would be even better than paper, and would add to the appearance.

The sections should be honest, even weight and color. No section should weigh less than $13\frac{1}{2}$ ounces. (The first two seasons I shipped nothing under $14\frac{1}{2}$ ounces.) They must be perfect, and No. 1 in formation and capping. Then quote by the section and seek in a city for a customer who can use all you produce. Employ all your spare time improving the appearance of the section so it will sell, and orders will be repeated. I would not care for a customer who did not repeat. You are the producer. You make the package attractive, and the price will take care of itself. If a customer does not repeat, it is your fault and not his. He has to have the honey to sell, and you must create the demand for *your* honey.

I have been in my store for thirty years, and I know the kind of goods that sell. When a lady sees a new-style package of food, and is shown that the package is fly and dirt proof, she is always interested and expects me to talk up the goods. She is attracted as much by the package as by the contents. Nearly always I make the sale, and the next day I have calls from her neighbors for the same article.

Each section should be wrapped in transparent paper, and tied with a strand of bright-colored silk. I think the coming season will see all my sections tied with a ribbon similar to "baby" ribbon. Our honey crops are sold a year in advance. For three winters we have not had honey to retail at home, and to-day we have none for our own use.

We have been shipping in these pails for about seven seasons, and have yet to get the first report of contents received in bad order. We have taken particular pains to ask express agents at destinations to examine shipments, and all have reported best of condition. No pail has ever been returned to us with a stain or mark of a broken section. In fact, one can safely guarantee that honey packed in this way will arrive in a satisfactory condition. The secret is in the shape of the package, since one can not be set flat down, but always strikes the edge and has a rolling motion.

We have customers in several towns and cities who sell from a few hundred to a thousand sections to whom we have had to return their extra orders unfilled. Frequently strangers come into the store and make the remark, "Oh! this is where the honey comes from, tied with a silk thread." So we see that the smallest detail, the silk



Kirkpatrick's honey-wagon.

thread, is noticed, and serves as a trademark. An old customer called, and said she had come for a pail of our honey, and asked us to ship it to Lincoln for her. I told her that this would be impossible, as a dealer there had bought all our crop; and as we were shipping about 600 lbs. that week she could get the honey of them. She did not think that was exactly fair in us, but we wrote our customer to see her at once and sell to her.

Be sure to protect your customer, and be very careful not to compete with him. I could have made fifty cents more on the pail by selling to that lady, but I might have lost my customer. We positively refuse to sell at retail to any one who lives in a town where our honey is on the market, although we have many chances to do so.

Bradshaw, Neb.

SELLING HONEY DIRECT TO THE CONSUMER

BY GEORGE H. KIRKPATRICK

Beekeepers who have the time and talent may dispose of a quantity of honey at retail price. By a thorough house-to-house canvass in the neighborhood or county I have sold many tons of extracted honey to farm-

ers, lumbermen, and wood-choppers. In selling honey in the homes we must abide by the golden rule and always do unto others as we would they should do unto us.

When approaching a new customer ask him for a few moments of his time, and then in a few words give an outline of the proposition. At the same time remove the top from a pail of honey, and ask the prospective customer or his children to sample the honey. With book and pencil in hand ask the gentleman for his name and address; and while writing it inquire how many pails of honey he wishes. He will be quite sure to take a pail; but if he should not it will do no harm to have his name and address.

Offer for sale only the best honey, and ask a fair price for it, which should be 5 cts. per lb. above the wholesale price. The honey should be put up in ten-pound friction-top pails, and neatly labeled. Make the same price to all customers, and request the retail grocers to whom you furnish honey to sell to their customers at your retail price.

One of the most important parts of the equipment is a special vehicle, neatly painted and lettered. Such a rig will bring many a customer who would otherwise be missed. The illustration shows my vehicle. It is painted white, and lettered in black. It has

a carrying capacity of 500 lbs., or 50 ten-pound pails. Fifty-one ten-pound pails are also shown ready to load in. The same body can be put on a sleigh for use in winter. I also have another wagon having a carrying capacity of 75 ten-pound pails. Both rigs proved comfortable to ride in, and a great help in selling honey.

Rapid City, Mich.

WHY THE DARK COMB HONEY SOLD SLOWLY

BY N. B. JOHNSTON

Without being able to give the dates when they were published, the writer recalls several short articles emanating from the editor, somewhat in the nature of remonstrances against the tendency of apiarists to produce and to offer for sale an excessive quantity of extracted honey at the expense of the quantity of comb honey produced. I would make a few remarks on that position of the editor, subject to such reply or criticism as may seem proper.

I wish to state in the first place that, although this will be the eighth season of my experience as a beekeeper, I still feel myself a novice at the business, as I see so much about it which I must learn before I can consider myself or would be considered by others as an expert. During all this time I have confined my operations to the production of comb honey. Although I have had an extractor during the past two years, I used it to a very limited extent last year.

My advance in a knowledge of the business has been slow, and my production consequently small. For several years after starting I was able to dispose of my honey without much trouble; but last year my increase had attained a total of twenty-four colonies, two of which produced nothing; and three others, being utilized in carrying out Doolittle's method for swarm prevention, left me nineteen only as honey-producers, from which I obtained about 2000 well-filled sections, a large proportion of which was, as it appeared to me, as pretty honey as could be made in this region, though I have never seen (what I read so much of in GLEANINGS) any of the handsome honey made in the North, so I can make no comparison between it and the product of the bees in the South, samples of which I sent at Christmas, in twelve-section shipping cases, to friends in North Carolina, Virginia, Tennessee, and Pennsylvania, all of whom, whether to flatter me or not I can not tell, pronounced it "delicious." This,

after making some small sales on the home market, left me with something over 1700 sections unsold, which I shipped on consignment to a large produce house in one of the largest cities in the country. I was advised that it all arrived in good order, no complaint being made on any score (though I especially invited criticism for my own information), except to say that, owing to color, it was not so acceptable to the trade as was the white honey from California; but knowing that every thing offered in the market, in other lines than honey, is not always, and all the time, "first class, A No. 1," I supposed that a market would be found for this shipment, though not expecting such prices for it as could be obtained for the more popular kinds.

But in this I have been much disappointed, being advised within the last few days that still one-fourth of the shipment remains unsold. This unsold portion is doubtless the darkest, which you say the people up your way will not buy, notwithstanding the positive claims of your Texas correspondent of last year for its superiority. We can not control the operations of the bees in this respect, and must take what they give us.

In contrast with this I shipped a small quantity of the same honey, which had been extracted, to a dealer in another direction, and received returns for it within a few days after its arrival at destination; and the problem which confronts me is how I shall shape my operations for the coming season. I have a full outfit for comb-honey production, and also an extractor. I now have 31 strong colonies. So far as I am concerned, beekeeping is only a side line as a means of occupation during a protracted period of idleness in my regular business. I secure more entertainment and occupation in handling the apiary for comb honey than for extracted; and I like that branch of the business best; but if I can not sell the product, how can I make the business even self-sustaining, to say nothing of its being profitable?

Greenville, Miss., March 25.

[We may be wrong; but we should say that a local market should be built up to take care of the darker grades of comb honey. "Snowy-white" sections usually sell the quickest, and on this account dark comb honey should not have to compete with the white. There are many localities where the darker honey is better known (and better liked), and as a rule it is best to seek such a market rather than one where the demand is largely for the white.—ED.]

HOW ARRANGEMENTS ARE BEING MADE FOR THE HANDLING OF HONEY

BY E. G. WARD

The pictures shown herewith illustrate a new departure in the history of the disposal of honey produced in New Zealand. It has been well known among beekeepers that the production has been steadily increasing for a number of years, and that each year sees an increase of those engaged in the industry. The season of 1912-'13 has been an exceptionally good one in most parts of the dominion, and in Canterbury in particular. These conditions have all tended to bring matters to a head; and the result is that the National Federated Beekeepers' Association of New Zealand has now completed arrangements for the first shipment of first-class honey under government grading rules. The shipment consists of 11 tons, all sent by two producers only, and a similar quantity will be dispatched next month, and subsequent shipments as producers get better acquainted with the scheme. The first shipment will leave early in May; and as the quality is so high there is no doubt of

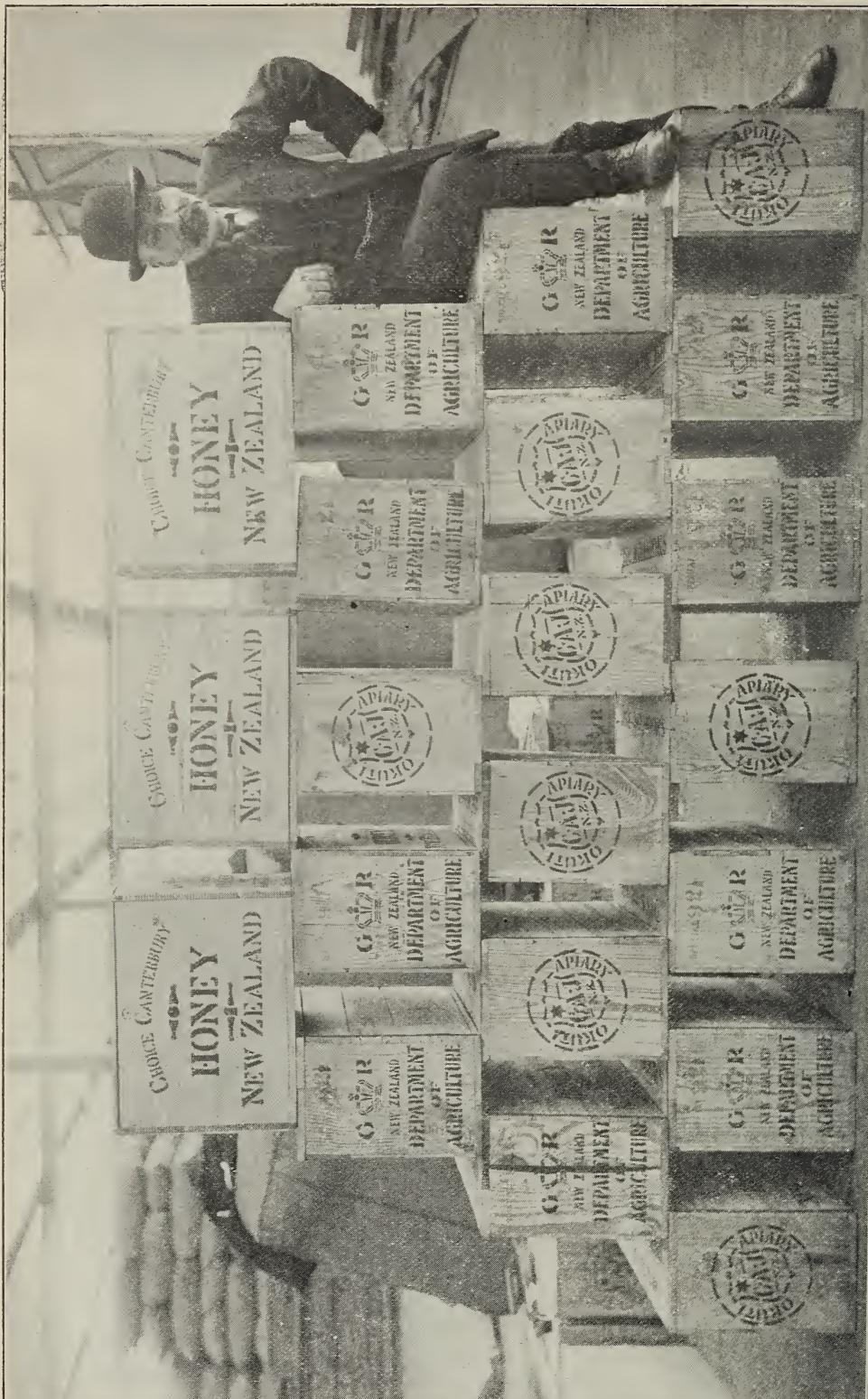


E. G. Ward, Christchurch, N. Z., Secretary of the National Federated Beekeepers' Association.

good prices being obtained. The fact of having the government grading mark will be a guarantee of quality; and as it goes under the supervision of the Federation, beekeepers need have no fear but that their interests are fully safeguarded.



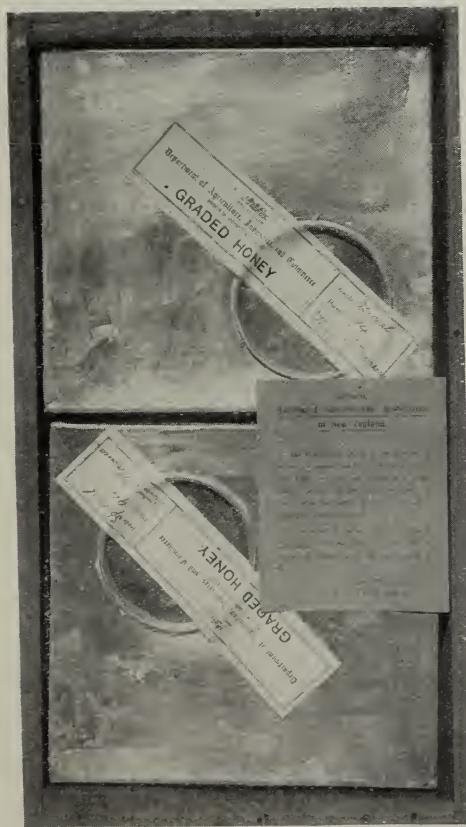
Honey exhibit by the Canterbury Beekeepers' Association at the chrysanthemum show, Christchurch, N. Z., April 7, 8.



Mr. C. A. Jacobsen, President of the National Federated Beekeepers' Association, and part of the first shipment of honey. Each case contains 100 lbs. Mr. Jacobsen has conducted the negotiations with the firm of Mongomery & Co. for the Federation.

Inquiries are coming in daily to the secretary, and the success of the scheme seems to be assured. It is necessary that any one sending through this channel should endeavor by every means in his power to produce nothing but the best honey, and handle it in the cleanest manner. No unripe honey will be sent; and it must be in granulated form. The cases should be new and clean, bound with iron, and branded on one end with the initials only of the producer. Tins must be new and clean, and contain 56 lbs. net each, and packed two in a case. A sample must be sent first to the secretary for approval, and on approval the place to consign to will be mailed. It will then be graded by a government expert, and stamped, and then shipped as soon as convenient. Arrangements can be made for a cash advance when ready to ship, and centers other than Christchurch will be established when sufficient inducement offers.

Christchurch, N. Z.



Case of Honey graded and sealed with the N. F. B. Ass'n certificate attached.

SELLING HONEY TO RETAIL GROCERS

BY H. W. DOERR

Taking for granted that one has the bees, hives, and the necessary equipment, the next important thing is the honey itself. After I have the honey, the next step to take is to find out its kind and quality. In fact, I watch this point from the time the bees begin to store a surplus until the honey-flow ceases. I also keep tab on the honey-crop reports as given in the bee journals, and study the market quotations of the newspapers with the view of determining what honey of the same quality as mine would cost if shipped in from some other locality, and also what my honey would net me by shipping it to some other market.

Having fixed these two points clearly in my mind I proceed to fix my price by striking a mean between the import and export prices. That is, I make my price somewhat higher than the export price, and somewhat lower than the import price, because experience has taught me that it is safe, and good business policy, to do so. Right here let me say that it is of the utmost importance to have the price set on your honey before you offer it for sale. Otherwise the dealer will be slow in buying, and he will pay you just as small a price as he dares to give.

After the question of price is settled, and I have decided to put my honey on the market, the next thing that I do is to give some attention to my own personal appearance. This does not mean that I put on the best clothes in my possession, nor any display of style; but I do shave, and lay aside my daily working clothes for others which are neat and clean. Then I make a tour, interviewing the different grocers of my home town. When I step into a store where the owner is not known to me I inquire for the proprietor. Having found him, I usually ask him if he handles any honey. His answer generally is that he has none on hand at the present time. Then I ask what would be the chance of selling him a case of honey to be delivered in a week or so, naming my price, and stipulating that I will take a part of the pay in trade. This usually closes the deal for a case or more.

If I have had a good look around the store, and find no honey in sight before I meet the proprietor, then I sometimes ask him point blank if he has any honey to sell, to which he usually says he has not. Then, of course, I ask what would be the chance of selling him some honey, so that he will have some to sell. If he is a free talker I



Christchurch offices of the shipping firm of Montgomery & Co., who handle the honey for the N. F. B. Association of New Zealand.

let him ask me about the kind, quality, condition, and price, which I promptly tell him; but if he is somewhat reticent I do the most of the talking, explaining the kind, quality, condition, price, and terms of sale. In this way I seldom fail to land an order for future delivery.

I always sell on future delivery, for several reasons. First, if I have the honey with me for immediate delivery I never can make as good a sale as I can on future delivery. Second, if I have the honey with me for immediate delivery, and I fail to make a sale, I take too much of a risk getting it damaged by having to haul it home again.

I remember going into a store one time where the proprietor was not known to me, and every one connected with the store was busy. I had been in the store a few minutes when a friend and acquaintance came in and began to jolly me by wanting to know what I was doing in that part of town. I told that my business that day was selling honey.

"Oh! you keep bees, do you?" he said.

I told him I did. Then he began to ask questions about bees and honey. I answered his questions, and explained my way of producing honey. Before I got through, five or six others had come in and had joined in the conversation. Finally the proprietor became curious to know what it was all about; so he came up and listened until he found who the bee and honey man was. Then he asked me if I had any honey to sell. Certainly I had. Would I bring him

a case next time I came to town? Yes, I would. Thus I got his order without telling him the object of my visit.

When I go into a store where I am acquainted with the proprietor, and it is at the opening of the season, and I have sold him honey before, I simply ask him, "How is the honey business?" He usually asks about the kind, quality, and price, which I tell him, and I usually get his order. I never try to persuade a dealer to take a case of honey against his will or judgment.

My honey is all stored in one-pound section boxes, and I market in glass-front single-tier shipping cases. These cases I leave with the dealer until he has all the honey sold out, when I take them back and refill them.

In preparing my honey for market I scrape the gun or propolis off as well as possible, and grade it carefully according to weight, color, and quality. I also make it a point to deliver at the appointed time.

My 1912 crop of honey was sold practically without any solicitations. In fact, a large part of the orders came voluntarily by telephone. And this reminds me how I have taken orders by telephone in the past. If I decide to sell honey by telephone I call up a dealer who knows what I have; and when I get him on the line I say to him, "This is Doerr, the honey-man. How about bringing you a case of honey to-day?"

If he is out of honey, or his stock is low, he will say, "Bring me in a case." If he is not quite ready for it he will say so, and name a time for delivery of the honey.

I find it a great advantage in making a sale of honey to take out part of the pay in trade, as already stated. I can make sales based on that sort of terms when otherwise I could not sell at all. If a man asks me to take out all my pay in trade I decline to sell, saying that he does not handle everything I need, and must have cash to get them at other places. This statement almost always wins him, and I get his order according to my own terms.

I also make it a point to advise a dealer how best to take care of the honey and how



Bringing in a shipment of 11 tons from the railroad siding, to be graded. The cases are opened ready for grading, and the government grader (in center), Mr. L. Bowman, ready for work.

to display to the best advantage for the purpose of bringing it to the notice of a prospective purchaser.

Most dealers like to talk bees to some extent; but their conversation is of an interrogative nature. Some want to know what the king bee does, and what position he holds in the society of beedom. I tell them that the head of a colony or swarm of bees is not a male but a female, and is known as the queen, and that in reality there is no such thing as a king bee. Moreover, the queen ordinarily is the mother of every bee in the hive of a well-regulated bee family, and is the only bee in the hive capable of living more than a year, and that the well-being and prosperity of a colony of bees depends upon the prolificness and health of the queen.

On the other hand, there are some who want to know if those big fat fellows which one sees hanging about the entrance of a hive on warm summer days are king bees, and then I explain about the drones. Sometimes I run across a fellow who has the artificial-comb-honey bogie in his head, and he will go to considerable length trying to

show that there is such a thing as artificial comb honey. I call his attention to the fact that The A. I. Root Co. has been offering one thousand dollars for a pound of artificial comb honey that can not be detected from natural comb honey, and that this offer has been standing over twenty years, and so far has had no takers: but if he has the goods, or can get them, the money is worth the effort. So far no one has offered to produce the required pound of artificial comb honey.

I also find it advantageous to study the different temperaments of the various dealers. For instance, if I meet a man who is lively and full of fun I jolly him or tell him a funny story. On the other hand, if I meet a slow-going steady man, I don't rush him, but give him all the time he wants, and make only such remarks as are necessary for the intelligent transaction of business.

Thus I keep up the interest in my stock in trade, and the sales continue to increase, until to-day the demand is greater than the supply.

Beardstown, Ill., Feb. 24.

SELLING HONEY FROM HOUSE TO HOUSE

BY A. L. BEAL

To my mind the most delightful thing about the whole bee business is to sit and watch the bees work when there is a good honey-flow. For tired nerves and a fagged-out brain there is nothing better. It is an inspiration to any one. A few days of watching the bees will put even a person of poor health in a good condition for "marketing honey," which is the next most delightful thing in bee work, and almost as healthful as watching the bees. I have never found more than one discouraging feature in marketing the honey; and that is, it is so soon sold, and so many people are yet wanting honey. The oddest thing about it is, the more you sell, the more people will be wanting it when you have sold out.

I believe that I know exactly how the ordinary beekeeper can market his honey, and at a fair price. I have had several years of experience in selling produce direct to the consumer, and I never represent what I have to sell as having qualities which it does not have. I always try to avoid exorbitant prices, and to be strictly conscientious in every thing, and so when I commenced selling honey two years ago I had no trouble at all.

Get some Mason glass fruit-cans, pint and quart size. Fill them nearly full of comb honey, and pour in liquid honey until the pint weighs $1\frac{1}{4}$ lbs., and the quart $2\frac{1}{2}$ lbs. Be sure to have the cans full. A little practice will enable you to know just the proportions of comb and liquid honey to put in so the can may be full and of the proper weight. Then take a few more cans of each size, and fill them with liquid honey. They should contain by weight, pints, $1\frac{1}{2}$ lb.; quarts, 3 lbs. If you have a few pound sections that weigh 12 or 14 oz., get some of those too.

Load all these in your rig and start for town. Any town will do, but the bigger the better. Stop at the first house, and take as large a can of the bulk comb honey as you have on the wagon. Holding up your can, say, "Good morning, Mrs. A. Are you a lover of good honey—honey that is honey—real old-fashioned bee honey?"

Keep holding up the can, and change its position and keep talking. But do not talk all day. Let her ask the price. Then you can tell her it is 20 cts. per lb., and $2\frac{1}{2}$ lbs. in a can. Be sure to say it that way. If you have ever been an agent you have learned the great power in certain combinations of words. Never use the term "half

a dollar." Well, it may be that Mrs. A is not fond of honey—doesn't know how good it is, and doesn't wish to buy. Then leave as politely as you can. Do not urge her to buy. Before your next visit to town she may have heard how good it is, and be watching for you.

Mrs. B is quite fond of honey, but has only 25 cts. about the house. Sell her a small can. Get your can back or an empty one in its place.

Mrs. C doesn't like comb at all, but would be "awfully glad" to get some "strained" honey. Sell her two cans—quarts, of course—and take the pint on to Mrs. D, who is short on change.

Mrs. E always gets it in "these little boxes." Sell her a light weight for 20 cts.; and so on down the line to X Y Z if your honey holds out.

Tell them all you will be back, and don't forget to go back, for most of them will eat all the honey long before the appointed day.

Westfield, Ind.

ADVERTISING PAYS

A Producer who has Spent Several Thousand Dollars in the Past Four Years in Advertising

BY R. M. SPENCER

What would it mean to all the beekeepers of the United States if the price of their honey should be raised 1 ct. per lb.? It would mean thousands of dollars, and, in many cases, put the bee business on a more profitable basis. Many will say the supply and demand regulate the price. This no doubt is true; but it does not mean that we can not increase the demand. This can be done by producing a first-class article and creating a demand by advertising.

To obtain these higher prices, all apiarists should endeavor to produce a better and riper grade of honey that has the quality behind it to bring the repeated orders from their customers.

All honey of the best quality and grades should be advertised under a trademark, thereby giving it a name for the customer to remember and order by. As long as the quality is held up, the business would about double each year.

I have spent several thousand dollars in advertising honey in the last four years, and know by experience that the orders will double each year from the same territory. Mrs. Jones orders a case of twelve 10-lb. cans of my best honey. She sells one can of it to Mrs. Brown and various other women; and if the goods are all right these neighbors are sure to want some of it.



THE DASHEENS IN A. I. ROOT'S FLORIDA HOME ABOUT APRIL 1.

The above picture was taken by one of our beekeepers who happened along at our place—Mr. H. T. Gibson, Wilmore, Ky. The dasheens shown in the picture were those sent me by the Department at Washington. They were planted about Jan. 1, but did not show above ground much until about Feb. 1. The tubers are somewhat slow about starting, and the plant itself does not make very rapid growth until settled warm weather, for it is a tropical plant. I hope to be able to give another picture, more up to date, in the near future.—A. I. Root.

In building up a mail-order business for honey, great care should be taken to please the customer. All prices should be plain, freight prepaid if possible, and instructions inclosed to all buyers to pay all overcharges of freight, if any, and that you will refund the same, which should be done at once on receipt of freight bills. If the above rules are not carried out, in many cases the customer will refuse goods because of small extra freight charges demanded by the railroad company.

All honey should be put up in a very attractive package, which means half the sale, as customers are always willing to pay a little more for goods put up under an attractive label.

Many beemen in this vicinity claim that the advertising of honey is not a poor man's proposition. This is where they are in error. If the honey has the quality behind it, it can be advertised in a small way at first, and in a very short time create a good demand. Look at some of the leading brands of food products that are to-day advertised, and millions of dollars' worth sold each year at fancy prices. Why? Simply because the manufacturer has produced

a first-class article and created a demand for his goods. He has made the customer want his goods and come to him for them. There is no question in selling honey but that, if every beeman or even one-fourth of the leading producers would get together and spend ten cents per hive every year in advertising and creating a demand for the honey, sales would increase as well as the price, and it would be a very profitable investment for all. In co-operation there is strength, and there has never been an advertising campaign of education of as good an article as honey that has failed where properly managed.

Most beekeepers figure on a wrong basis for money spent for advertising. If a bee-keeper produces, say, ten tons of honey a year on an average, which he sells for \$140 per ton, suppose he spends \$100 per year in advertising the honey and sells it at \$150 per ton net to him, he will figure that he has got his advertising money back, but has done the work for nothing, which will be true for the first year, while the second year he will continue to get orders; and by spending \$50 he will sell more honey than he did in the first year. Thus the business

will grow every year; and by the fifth year he can sell five times the honey on the same amount of money for advertising.

The main idea in selling goods to any customer is to make it as easy as possible to buy. Experience has shown me that "c. o. d." and order bill of lading shipments with sight draft attached, pays. This allows a customer to go to the depot and examine the honey where he can see that the goods are all right and up to the sample sent him. I find that the refusals of such shipments amount to less than one per cent of all orders shipped.

My experience has been that the best size packages are 2-lb., 10-lb., and 60-lb. cans. The 2-lb. cans can be used by a retailer in stores, etc.; the 10-lb. can by agents who sell the honey from house to house, while the 60-lb. cans are suitable for families who consume quite a lot of honey each year. I think it is a great advantage to have as few grades as possible. If all grades were mixed together, thus making a white honey, it does away with sending samples of different grades, and customers always know what each shipment will be.

I send out samples at 10 cts. each by the thousands each year, and large sample packages weighing one pound at 20 cts. each to customers desiring to sell the honey by sample. I also have printed rules as to how I grade my honey, as follows: A water-white honey; objects can be seen for 50 feet through a one-inch bottle, such as man, etc. Printing can be read through the same bottles for white grade, etc. There is a big future for the sale of first-class honey, which can easily be developed if properly handled, and I hope to see the day when it is sold in this way.

Nordhoff, Cal.

COMPETING WITH HONEY DELIVERED FOR SIX CENTS A POUND

BY LEON C. WHEELER

The article on page 691, Nov. 1, 1912, by Frank C. Pellett, reminds me of my struggles to develop a honey market. I had a proposition to deal with, however, which was altogether different, for my competitor was selling extracted honey at 5 and 6 cts. a pound, and was delivering it at the door. I too wished to produce extracted honey; but I had no desire to sell it at any such price as that. Comb honey was no better, as it brought from 10 to 12 cts. a pound in the local markets.

The first year I had hard sledding to sell any honey at all at the price I was asking, which was 8 cts. a pound for extracted. My

competitor was selling at six, the same as before, and had already established a trade. His method of extracting, however, was against him, for he extracted his honey just as fast as it was carried in, which made it rather insipid, and there was danger of its spoiling entirely. Nobody thought any thing of that, however, as that was the kind of honey they were used to. Well, I took a lot of pains to get my honey well ripened, and to keep the dark honey separate from the light, and started out that fall to try to sell it. The price was too high, and I made very few sales, and those were mostly to people who wanted a little to last them until they could see the other fellow and buy their supply for the winter. I suppose I was criticised considerably as being pigish in trying to get so much for my honey.

I didn't have a very large amount of honey that year to sell, and some way I managed to sell it all; but the next year there was quite a lot more to dispose of, and I felt some fears as to the outcome. At that time I knew nothing of trying to sell in the city. My competitor, in the meantime, had boosted the price to 7 cents. He had learned a thing or two. I took his bluff, and raised mine to 9 cents. This time I was agreeably surprised to find that I could sell in a good many more places than before. Nearly all of those who had bought of me the year before were ready to order their year's supply of me that season. There was lots of kicking on the price; but in the end they would buy my honey. They would come at me about like this: "I like your honey much better than Mr. N.'s, but it seems to me your price is awful high. Why is it you can't sell just as cheap as he can?"

My answer would be something like this:

"The reason you like my honey so much better than Mr. N.'s is because I leave it on the hive to ripen, and because I take pains to put up only a good article. This makes it more expensive to produce, and I have to charge more for it. If it isn't worth the two extra cents I don't want you to buy it."

I found a few who preferred to take the cheaper honey at the smaller figure; but the good honey won out in most cases, until to-day I am selling in four out of every five places. My prices now are made according to the grade, with the average at ten cents for extracted.

There are too many small beekeepers and too small a town here to make any very great sales of honey locally, although by peddling and bringing it before the people there is a chance yet to increase the trade considerably.

As time went on I took to following the

fairs, and found it so profitable that I have kept it up ever since. At the State fairs and all large ones it is no trouble at all to sell comb honey at 20 cents per section, and extracted honey in 1-pound jars at 25 cents per jar. One gets in touch with all the fancy dealers too, and a great many who buy for their own consumption, until now it is not a question of "Where can I sell my honey with profit?" but "Where can I get the honey to fill all the orders?" This puts me just that much nearer the consumer. In fact, most of my honey is sold direct to the consumer, and the rest of it to fancy dealers who retail it. I have several customers who have already spoken for honey to be put up purposely for them next year to the amount of 500 to 1500 or 2000 lbs. each, at a figure that nets me $12\frac{1}{2}$ cts. per lb. for extracted. This makes a good bargain for them, as they are securing a choice article at a reasonable figure, and at the same time I am getting more for my honey than if I were to sell in the ordinary way.

Barryton, Mich.

SELLING COMB HONEY BY WEIGHT

BY R. A. BURNETT

Mr. Root :—On p. 140, March 1, in *Stray Straws*, selling comb honey by weight or by the package is taken up both by Dr. Miller and yourself. While I may not be able to dispel the haze, I will endeavor to put certain facts before yourself and those concerned.

In Illinois the law as interpreted by the legal department of the city of Chicago (with whose representative I talked yesterday) is that any thing that implies weight must be sold by weight; but a package sealed, such as the Uneeda biscuit, can be sold as such without reference to weight; but if the purchaser asks for a pound of crackers and is given a package that weighs but six ounces, the vender is liable to a fine of from \$25 to \$200, or thereabout.

Last summer on this market several commission men were arrested for selling baskets of fruit, say of peaches, that were called pecks, half-bushels, and bushels, but which when weighed and the receptacles measured were found to be scant. Fines were imposed upon the sellers for the reason that the purchaser had asked the price of a bushel of peaches and were sold a basket said to contain a bushel.

While we have not learned of any arrests for selling a case of honey containing 24 sections representing them to be pound sections, but in reality weighing less than 24 lbs., yet we infer that the offense would be

similar when the buyer asks for a case of honey containing 24 pound sections. There are very few dealers who will buy a case of honey unless guaranteed that a certain net weight is contained therein.

Dr. Miller asks if there is any likelihood in the near future that there will be uniformity. Replying, I would say that uniformity is desired by all of us, if for nothing else than the eliminating of labor and confounding of terms. Yet there are few of us who can read accurately what is going to occur in the future. We think we see certain results; but as they are about to be realized, a new phase of the difficulty arises, and once more the certainty becomes an uncertainty.

The writer, in reviewing the history of more than thirty years in vending honey, is of the opinion that the mind of man is quite uncertain. To illustrate is quite unnecessary, as persons of middle age will have learned that in their experience.

We speak of a wood frame that is made so that it can contain 16 ounces of comb honey more or less. When the seasons are favorable, and intelligent manipulation is given to the frame, the weight of each approximates 16 ounces, usually spoken of as one-pound sections, but that the section may contain only half of this amount is also true.

In Colorado or the Rocky Mountain region it seems that the producer can come more nearly to a given weight in sections than in any other part of the country; and I have been told that the reasons are that the bees gather about so much nectar each day during the working period, the bee-keepers use separators and other means for guidance of the bees in storing, and the apiaries are large enough to enable the apiarist to select sections of about an even weight and pack them in a case so that a number of cases will not vary more than a pound each, many of them being the same weight, so that the seller can say that his lot of honey averages 21 lbs. net to the case, or that there is a lot that averages 18 lbs. net.

Now, as a matter of fact, isn't this selling honey by weight when a given amount is guaranteed? What has been said applies chiefly to the producer and wholesaler. Retailers differ in their method of selling honey. Some will buy five or ten cases of honey containing 24 sections each; will pile it up on the counter or in a showease, and sell by the section. If the honey has been graded as would be necessary under the Colorado rules, the difference in weight would not be more than from one to two ounces; but if it was under the eastern grading

rules they might vary from one to ten ounces, and in that case the retailer sells at so much a section until the heavy weights are sold out, say at 25 cts. per section, then he reduces the price to 20 cts. per section, and finally to 15 cts., to close out the light weights. Therefore it is the opinion of the writer that the true method is to buy and sell by weight; and to transact business legally in this State he has no alternative.

It is true that he may sell 100 cases of honey containing 24 sections each at \$4.00 per case if he guarantees that none of the cases will weigh less than 20 lbs. net, nor exceed 21 lbs.; but after all, weight is the basis of the transaction.

Chicago, Ill.

[The pure-food law was modified at the last session of Congress, the modification having to do with marking the weights on food packages. See the article by J. E. Crane which follows.—Ed.]

THE NEW LAW REQUIRING NET WEIGHT TO BE MARKED ON FOOD PACKAGES

BY J. E. CRANE

It may not be generally known that an amendment to the pure-food law was passed at the last session of Congress, and signed by President Taft on March 3. This amendment makes it obligatory on those putting up food for interstate commerce to see that the quantity of food packages be plainly marked on the outside of each package in terms of net weight, measure, or numerical count. This amendment does not become a law until eighteen months from March 3. This will be comparatively easy in the case of extracted honey; but who shall say just what the net weight of a section of comb honey is? Will it include the comb as well as honey? Most likely. But how about the rim of wood around the comb, or the carton or glass that is used to keep the dust and flies from soiling the comb?

The committee appointed by the secretaries of the Department of Commerce, the Treasury Department, and the Department of Agriculture, to draw up regulations for the enforcement of the new net-weight law announces that it is now ready to receive in writing recommendations and suggestions.

Middlebury, Vt.

[In a press notice sent out by the U. S. Department of Agriculture, the new national net-weight law is quoted. We give here-with, in full, the paragraph in question:

A food product will be deemed to be misbranded: "If in package form, the quantity of the contents be not plainly and conspicuously marked on the outside of the package in terms of weight, measure, or numerical count; provided, however, that reasonable variations shall be permitted, and tolerances and also exemptions as to small packages shall be established by rules and regulations made in accordance with the provisions of section three of this act."

From the above it appears that there should be no great difficulty in obtaining a ruling that will apply to comb honey.—Ed.]

BEEKEEPING IN NEW ZEALAND

BY E. G. WARD

Mr. R. N. Gidley* started beekeeping five years ago with a few colonies, and had fair success. The last two seasons have been exceptionally bad in most parts of New Zealand, 1911 and 1912 being about the worst in 20 years. Mr. Gidley went in for increase more than for honey during this bad season, and, in addition to getting no surplus, had to feed $\frac{1}{2}$ ton of sugar to carry the bees through the winter. This was done at his home at Fendalton, near Christchurch, and in the spring 1912 he moved his bees to Lakeside, about 27 miles away, taking them in a spring cart, principally during the night. Several trips were required for this, and he got them all there about the end of October. This was too late for the willows, which are plentiful round about there. The season up till the middle of November was very poor, and it was necessary to feed, as we had a lot of cold wet weather. From this on all through till now (March 9), the weather has been ideal. The spring count was 75 hives—increase 25. The crop for the season totals 9856 lbs. extracted honey, and 100 sections. The 25 increase will go into winter quarters on six or seven frames.

In addition to the honey stored, 1500 half-frames have been drawn out, and 600 full frames, so it will be seen that, if the same number of combs had been on hand, the surplus would have been much greater. The colony in the tall hive shown in the engraving on page 374, June 1, gave 417 lbs. by the end of the season. The bees were shaken on full sheets of foundation on Nov. 8, and a full super of drawn comb was added, as there were eggs in the queen-cells. This settled the swarming, and during the season they have pulled out five half-supers and one full super of foundation. After the first extracting, the combs were put back; and the total yield has been 417 lbs., and no further attempts at swarming.

The four best colonies gave as follows:

* Various views of Mr. Gidley's apiary appeared in our June 1st issue.—Ed.

417 lbs.; 275 lbs.; 257 lbs.; 235 lbs.; total for 4 colonies, 1184 lbs.

All these are leather-colored Italians. Mr. Gidley finds the leather-colored ahead of the golden every time.

Christchurch, N. Z.

ADVERTISING UNTIL THE CUSTOMERS COME TO THE HOUSE

BY GEORGE SHIBER

Continued from page 446.

veil or gloves on;" or "Why, I have seen Shiber pick up bees by the handful and not get a sting," etc.

But what of that? I don't care a cent about the wonder expressed by people to think I can handle bees. *But I do want them to know I have first-class honey for sale.* And when the public knows it, the honey-producer will have a little co-operation of one member, and will be profiting by it until the larger co-operation comes along. But don't think I am throwing rocks at the co-operative plan.

Another thing we used to do, and that was to retail it from the tank—that is, sell one, two, or as many pounds as a customer wanted. It did not pay. Another reason, honey does not keep its fine flavor long, as there is a large space for air at the top of the honey; and it hurts the flavor, even though you have a tight cover on.

Randolph, N. Y., Oct. 5.

LONGEVITY MEANS A SHORTER PERIOD, RELATIVELY, OF NON-PRODUCTIVENESS

BY LEWIS P. TANTON

In a recent issue you invite opinion upon Mr. Doolittle's suggestion as to the importance of bees being long-lived. I submit that there is no quality in the bee of to-day more desirable to select and cultivate than hardihood coupled with length of life. From the egg to maturity, 21 days, the bee is a consumer. Fourteen days further it works within the hive, still consuming—a total of 35 days a non-producer. Deducting for bad weather, intermissions in the honey-flow, and a decimation of numbers by birds and accident, it is safe to estimate that the average working days of the bee (in the honey-flow season) will not exceed 30. Within that period this little worker must produce food to supply its successor during the 35 days of its incubation and development, food for its own maintenance, provide sufficient stores to last at least six months in winter, and to contribute what every beekeeper is looking for—a generous

surplus. From these facts I argue that every hour we can add to the working period of a bee's existence is a positive and untaxed profit. To illustrate this:

I imported a beautiful yellow queen and introduced her to a three-frame nucleus. As a producer of handsome and busy yellow workers she eclipsed any thing I ever witnessed. The frames filled from top to bottom and to the outer edge with healthy brood. I allowed her to increase until three body supers were full of brood and bees. I christened her my "thousand-dollar queen," and the only difficulty ahead was how to get so many bees into a compass small enough to winter. At the close of the season I reduced my appreciation of her value down to fifty cents, and she was worth that appraisement only for the lesson she taught. There was scarcely any honey in the hive. All had been consumed in brood-rearing, and there were not enough bees to fill one super fairly. I fed them; but in spring all were dead. The bees were good workers, quiet and healthy, yet short-lived, and, as a result, their whole period of field activity was insufficient to produce the surplus of stores, and what I would call the surplus life necessary to maintain the healthy existence of the colony.

This view of the question revives inquiry as to which is the best race of bees. The Italian, because of its adaptability to the largest area, the uniformity of its character for docility, and its reputation for industry, coequal with that of any other race, has won for itself the largest number of admirers. The great Creator in his infinite wisdom had the same just measure of the world's requirements in shaping the bee as in the other countless forms of life, and each of their varied forms and characters was destined for a work which the other was not adapted for.

Place my beautiful yellow prolific queen in an equable southern temperature with an abundance of nectar near at hand, and confine her brood-chamber to one or at the most two supers, and her value would not have met such a sweeping and spontaneous discount. In rugged mountainous localities where the bee is up against hardship and every variety of weather and climate, the Italian does not boast of so many friends. In the northern portions of Maine, in all the colder sections of Canada and the Northern States, the black bee or its crosses are the most in favor. Even in places of moderate temperature the three-banded and the leather-colored are recognized as the most profitable and reliable.

Now, why is it that the German bees succeed in certain localities so much better

than the vaunted Italians? They do not work as early in the morning nor as late in the evening; they carry on an average less brood in the hive, and yet in the end they produce as much surplus honey as other races would do under like conditions. I have not tested for myself, but I strongly suspect that the secret lies in the longer life and in the more extended working period of the black bee, and because less of the worker's labor is expended in the raising of brood and young bees, to die out again almost before they have gathered honey enough to pay for their keep.

There seem to be features in the character of bees suggestive of their nativity. Why do the black bees hasten under cover quickly at the approach of darkness, or when clouds loom up? and why do they scamper nervously away and drop like molasses from the combs when being handled? Is not this indicative of a boisterous place of origin and a desire to get in out of the cold or to escape impending storms? The Italian, on the other hand, is quiet and tractable, spreading itself evenly over the comb, and continuing its work almost regardless of disturbance. Is not this an exhibition of its inherent confidence in the blue skies and the balmy atmosphere of its native Italy?

Concluding, I am impressed with the belief that breeding for longevity and hardiness should call for the best skill of our apicultural specialists. I would further suggest that dogmatic conclusions as to the value of any particular race of bees for universal use be set aside, and a study of the adaptability of the different races to special localities be taken up. These features being satisfactorily understood, our bee journals, advisers, and supply-houses, instead of dumping their own favorite and probably successful race upon us would enrich us with bees suitable to our locality and our needs.

Charlottetown, P. E. I., Feb. 1.

OPEN-AIR FEEDING

BY MAJOR SHALLARD

I have been much interested in your plan of feeding, given in the A B C and X Y Z, by hanging kerosene-tins with perforated bottoms up in the air. But you state in the same place, "If the syrup were fed in open cans, thousands of bees would be drowned." This is not so. I once had an apiary of 250 colonies where the crop had gone off right in the middle of the season. The hives were short of stores, and the queens were ceasing

to lay. I knew this would not do. As it was an out-apiary I had no time to go to feed each colony individually, so I put out three of the largest galvanized iron washing-tubs, put the end of a kerosene-case in each for a float, spread a large sheet of hessian (coarse sacking) over the whole lot, leaving enough sag to allow it to go right to the bottom of the tub when it was empty. I filled the tubs to the top with honey and water, half and half.

I never saw more than a dozen or two dead bees in any of the tubs at any time. The hessian would float on the board, and the capillary attraction would wet it right up to the edge of the tub, even if the latter was half empty; consequently the bees had a large surface to alight on, and they did not get drowned. For that matter there was no place to get drowned, as there was no pool of honey anywhere, except the damp hessian. There was no robbing, although the tubs were put right among the hives. Before I had quite finished giving them the amount I had arranged for, the honey-flow started and the tubs were deserted.

It paid me well; and while I had a good population in each hive, and got a good crop, my neighbors' bees built up only strong enough to go into winter quarters, and got no surplus at all.

You will probably say they would have robbed if the flow had not come on. I do not think so. I think they would if the tubs were removed; but if left there they would simply visit them until they were thoroughly satisfied there was no more honey there, and then they would settle down.

If a comb of honey is left out and the bees begin robbing it properly, remove that comb and you will cause robbing; but leave it there and let the bees empty it, and when they are satisfied that the honey is all gone, they will abandon it and will settle down quickly.

If a half-story of honey is left out and forgotten while taking off the honey to extract, and I find the bees starting to rob it, I get it away quickly; but I put another half-story, with a little honey on it, in its place. Let them satisfy themselves that there is no more, and they will go away; but take it away, and they go looking for it and start robbing the other hives.

South Woodburn, N. S. W., Australia.

Rope Attracts Swarms

I had a queen among eleven whose eggs would not hatch this spring. I also notice that bees in swarming will be attracted by a rope wrapped on a limb or bush if placed in a conspicuous place.

Elizabeth, Pa., May 5.

W. T. FUEHRER.

Heads of Grain from Different Fields

Grading Extracted Honey by Means of a Standard System of Colors

The matter of grading honey correctly is a question of paramount importance to every one handling either comb or extracted honey. Mr. G. F. DeMuth, of the Bureau of Entomology, is quoted in your report of the National Association at Cincinnati as suggesting a scheme of colored cards to be used as a standard of comparison by which to describe any grade of comb honey as to color. This matter of a standard color-guide has been in my mind for some time; and since the subject has been broached publicly I am prompted to give my idea in the form of a suggestion relating to extracted honey only.

When extracted honey is viewed by transmitted light (that is, by the light through the honey), the color is lighter when the body of honey is small, and darker in proportion to the increase in the body. This, in the first place, suggested to my mind the advantage of always viewing the specimen through glass containers having the same diameter or distance through, so that, whether the specimen be light or dark, its actual color is shown to a certainty, and sample after sample can be compared to a nicety.

When this idea had been well considered I could not but marvel that the business of judging the color of honey has been done in the haphazard way it has ever since extracted honey has been a marketable product. The general use of a standard prescribed container for observing honey to be judged, say a test-tube $\frac{3}{4}$ inch in diameter, would put the question upon a fairly reliable universal basis. Assuming that this were done, there yet remains the human factor to be considered, for the specimen naturally looks to the seller much lighter than it does to the dealer. The possibility of a dispute or at least dissatisfaction can be avoided by the use of an accepted standard color-guide, to be viewed alongside the honey contained in standard-sized test-tube.

It seems to me that it would be appropriate for the National Association to select and make official and standard such a scale of colors made in glass (which is most unchangeable), the original to be kept by the secretary as the standard. The Association could supply certified duplicates to all who might desire to purchase. Every producer of extracted, and every dealer, should be provided with such a means of grading the product properly beyond question. Such a color scale might be made a permanent part of the standard-sized test-tube, thereby simplifying all operations.

The matter of grading extracted honey would be thus made an exact science. Any person not color-blind could grade honey. The seller could know exactly his grade before shipping, thereby avoiding any hocus pocus by the consignee. The demand for extracted honey is increasing, and the importance of standardizing the method of grading increases correspondingly; so that it would seem that this is a matter deserving attention and action.

New Jersey.

C. D. C.

Comb and Extracted Selling for the Same Price

I started about ten years ago with two stocks of bees, because I had a piece of land of about two acres on which I grew small fruits such as strawberries, raspberries, and black currants. I also had a small orchard of plum trees. I had a shop in the main street of the town, so I thought if I was clever enough to get any honey I should be able to sell it retail over the counter and get full price for it. I have gradually increased my apiary from two to 33 colonies of bees because I found I could make it pay, and also sell all the honey I could get. When I started I made up my mind to master the practical side of beekeeping; so I joined the county associa-

tion of beekeepers, bought the British Beekeepers' Guide-book, the A B C and X Y Z of Bee Culture, and read up all I could about bees. Each year I have bought more books and have taken bee journals regularly, so as to glean all I can about the theory and practice of beekeeping.

I can sell at retail all the honey I can get, and most years have to buy some more in order to supply orders. It is put up in $\frac{1}{2}$ and 1 lb. screw-capped bottles, and is sold at 24 cents per lb. I also sell the sections at the same price. The seconds, or those off grade, are all eaten at home. I make a profit on an average of about five dollars per hive each year, and some years more. This year was the worst for several seasons, the average yield of honey being 15 lbs. per colony. Last year my average yield was 40 lbs., the highest individual hive giving 72 lbs.

My district is the noted fruit-growing district of Evesham, in Worcestershire, and stretches for several miles on either side of the town. The farms are gradually giving way to fruit culture and vegetable-growing, so you see my honey is a mixture of fruit, honey clover, raspberry, peas, beans, etc. The fruit blossom comes early, and the bees build up quickly, and some years fill a super on each hive from fruit blossoms. I do not get any light honey around here. It is generally medium-colored, of a good consistency, and rich, thick, and of good flavor.

I have gone in for showing, and have taken two silver and three bronze medals, and about 35 money prizes, mostly at local or county shows. The exhibiting is a great help in selling my honey; and if I have a big lot I advertise in the local papers, and give a guarantee with every pound of honey.

W.M. J. WOOLLEY, JR.

Evesham, England, Dec. 2, 1912.

Sending Honey by Parcel Post

On p. 94, Feb. 1, I note that different packages are used in Europe for sending honey by parcel post. I have been sending honey thus for about three weeks, and have mailed about one can a day. One 11-lb. can was sent to the third zone; some were also sent into Massachusetts. All report that it goes through well, and that the honey is fine. Of course I am sending out nothing but the best of honey.

I am using a can made in Franklinville, N. Y. It has a $2\frac{1}{2}$ -inch screw top, and is tight when screwed down. I make a light wooden crate. The ends are $\frac{1}{4}$ thick, and the size of the can ends. I then nail two strips on a side about $\frac{1}{4}$ inch from the corner. When it is all nailed I tie a strong string around each end just back of the end; and as I nail the strip a little from the corner, the end corner sticks out so that the string can't slip off. I have some strips of tin 3-16 wide, and long enough to go around after it is all nailed, which I intend to try.

What we want is a reduced rate. It is quite surprising to see how short a distance a 50-mile zone is when you want to send a package. It is necessary to take the precaution to have every thing tight and in good shape. I have been wondering how far one of these packages would go safely.

Dexter, Me., Feb. 6.

A. R. BODGE.

Alfalfa Honey Usually Granulates Quickly

May 15, p. 329, Mr. J. E. Crane stands corrected about alfalfa honey granulating. We know from many years' experience with it that alfalfa honey granulates the quickest of any kind we have ever had any thing to do with. Our experience started in Wisconsin; after which we spent thirteen years in Michigan, two in California, five in Nebraska, and for seventeen years have been in Colorado.

Sedgwick, Col., May 22. GAIL CROWFOOT.

Eggs and Young Larvæ Do Cause the Disappearance of the Virgin; a Supporter of A. C. Miller

The above has reference to p. 796, Dec. 1, by Arthur C. Miller. I reckon I owe him something for that article. I have been losing more young queens for years than I liked. I never could understand why, and we had been told so often to give young brood, and not warned *not* to give eggs, that it had become a fact in my mind that it was the proper thing to do.

I have had many people apply to me to know why their young queens disappeared, and I could not tell them. No doubt it was the eggs. What the writer says about Henry Alley waiting three days before giving a cell is like an illuminating lamp to me. When I first started beekeeping—in fact, before I owned a hive—I read and digested "Manual of Beekeeping" by John Hunter. In this book he says, "After removing a queen, do not give a cell for 72 hours." He said he did not know why, but 72 appeared to be the magic number of hours to wait. For years I acted on this advice, and gave no cells for three days.

These were ripe cells reared on the Alley plan, and they would hatch within a few hours of insertion. After pursuing this method successfully, and not losing more than Mr. Miller says is the correct percentage, the cell-protector was invented. I adopted it to save those three days, and I lost anywhere from 25 to 50 per cent of my queens.

Even then I did not see what the trouble was. There might not be any thing in Mr. Arthur C. Miller's contention; but it looks feasible enough to me, and I am going back to the three-days' wait, keeping all eggs out of a hive containing a virgin.

MAJOR SHALLARD.

South Woodburn, N. S. W., Australia.

A Satisfactory Experience as a Helper in the Empire State

The account of the treatment of employees on a California ranch as given by "Subscriber," page 58, Jan. 15, contrasts strongly with the treatment of employees in the Empire State—at least such has been my experience. It was my privilege to spend most of the season of 1912 with a professional bee-keeper of Tompkins Co. I began my duties about April 1, and was well received and splendidly treated from the first. I received \$25.00 a month, with room and board, and ordinary washing included. I was given a very comfortable room, and the board was fine; in fact, had I been a member of the family I could not have been more generously used.

The work at the yards, of which we ran ten, was strenuous, and I was made to feel that I was expected to earn my money; but that, of course, was no more than I anticipated.

Only once during the summer was I sharply reproved. That was when I set an upper story containing a queen in deep grass. As I had been repeatedly warned against doing this, I did not blame my employer for speaking quickly. Of course there were several mistakes which were corrected by my employer, but he usually spoke quietly, and very rarely allowed his temper to manifest itself.

I left my place in September, feeling that I had spent a profitable as well as pleasant season. As I anticipate entering the bee business, the experience gained will be a great help to me.

Spencer, N. Y., Feb. 6. "SUBSCRIBER."

A Correction

My article, page 335, May 15, is different from what I wrote. Where it reads, "If no cells were started at the time of removing the queen, removing the two combs once," etc., it should read: "Removing the cells once is all that will be required before returning the queen and brood."

Honeoye Falls, N. Y., June 7. A. C. GILBERT.

Photographs of Swarms, etc., an Aid in Selling Honey

For the benefit of those who have any trouble in disposing of their honey I should like to suggest a little scheme that helped to a very great extent in securing orders in about nine out of ten stores in which I solicited.

By means of a camera, and with the help of the bees, here is my plan:

During the summer I take a few pictures of bees while clustered on the tree after swarming, or of different manipulations which will prove very interesting, and hold the buyers' interest. These help considerably, and will keep you busy answering some of the extremely laughable inquiries that people will sometimes ask in regard to bees.

When I first started in I took care to let the grocer see me whenever I was stung, thus proving that I was a beekeeper.

Chicago, Nov. 2. TIMOTHY P. O'DONNELL.

Drones instead of Queens

Please tell us what you would do if you had a neighbor, much (?) learned in bee culture, who would ask permission to get a queen from your yard whenever he had a swarm at home, and after receiving your consent would invariably march off in triumph with a drone? Understand me, he is too practical to read GLEANINGS. Will you please make it more convincing that the "moth" does not destroy bees in a normal condition?

I find it impossible to make my beekeeping friends believe that the moth is not the most deadly enemy of the bee industry.

Guilford, Kan., May 9. HERSCHEL SHORT.

[Ignorance is certainly bliss in case of your neighbor, who thinks he has a queen when he has a drone. However, after one trial we should think he would find out his mistake.

It is true that there are still beekeepers who are wasting their time fussing with moth-traps, moth-hives, etc., for the purpose of keeping moths away from bees, but all such are becoming fewer and fewer, as it becomes better and better known that strong vigorous colonies, especially of Italians, do not need any help in protecting the hives from the ravages of the bee-moth.—ED.]

Paste for Sticking Labels on Tin

April 1, p. 232, Mr. G. A. Barbisch, of La Crescent, Minn., wants to know whether there is a preparation which will make labels stick to tin. I am pleased to say that there is, no matter how small the label. If it is of any use to the readers of GLEANINGS they are welcome to use it. It is as follows:

Make a flour paste, being sure that it is thoroughly cooked. To a pint of paste stir in a quarter of a teaspoonful of powdered alum. Avoid too much alum, as it will cause the tin to rust and the stain to come through the label. Label the tins before filling with honey. I have used this paste for ten years, and never yet had a label come off.

Owen Sound, Ont. CHRIS. GRIMOLDBY.

Strengthening Honey-cases

For a number of years I have used shipping cases with a cross-piece $\frac{3}{8}$ inch thick through the center. I find that it reinforces the case, certainly half. I have no trouble with honey breaking from the sections. Others can do as well if they will use judgment in packing, being particular not to have hard lumps of straw or excelsior under the middle of those weak and frail cases that are used. Think of keemen asking that that frail box take care of our honey on the railroad. Does it look as if we knew how to take care of bees?

Theresa, N. Y.

B. J. WORSLEY.

Our Homes

A. I. ROOT

Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you.—MATT. 7:7.

And it shall come to pass that, before they call, I will answer; and while they are yet speaking I will hear.—ISA. 65:24.

Hitherto have ye asked nothing in my name; ask, and ye shall receive, that your joy may be full.—JOHN 16:24.

The following letter from one of our subscribers explains itself:

In your account of questioning the Savior, you claim to have got a "plain, distinct, decided 'No'" to each question. Why, then, do you go to Mr. Rood with some of your questions? If I had the use of a few pages in GLEANINGS each issue, and could go to the Savior with my questions with assurance of such prompt answers, I would ask him about many things the whole world has wanted to know throughout the ages, and give the knowledge thus gained to a waiting world. Even in such comparatively unimportant matters as beekeeping, gardening, poultry, health, eating, authoritative knowledge like that you receive from the Savior would be of vastly more value than any you are now publishing, as infinite knowledge is of more value than finite. You could easily double your circulation in a few months, and do an immense amount of good for temperance and religion. I should be pleased to read your answer to this question in GLEANINGS or in a letter.

My good friend, I am glad you have asked this question, because I may have been a little careless by leaving the inference to the effect that I *always* receive answers to my prayers in such a plain and emphatic way. I believe it is generally recognized that God answers prayer in different ways. Sometimes, as in the case mentioned, the one who is praying, almost as soon as the words are uttered, receives an enlightened conscience that enables him to see with his spiritual eyes, if I may use the expression, that he had been (at least for the time being) out of the straight and narrow path; or, in other words, that he had been unconsciously influenced by Satan to see things in a distorted light.

In our first text the dear Savior in his own words declares plainly that our prayers shall be answered. He says, "Seek, and ye shall find; knock, and it shall be opened unto you." Now, there are times—in fact, most of the time—when the great Father sees fit to let us work awhile, before getting what we ask for. In my work with the dictaphone God seemed pleased, if you will excuse the expression, to let me keep on at work, and be baffled again and again, before he told me or showed me how to get the results I was longing for. In the same way a good parent, instead of giving his beloved child every thing he asks for, shows him how he can get the desired thing by a little hard work.

In our recent studies of the history of Joseph we see how he was led from being a humble shepherd lad to the highest position in Egypt, next to the king; and Joseph had perplexities and disappointments so that, had it not been for his unwavering faith in God, he never could have stood for ages before the world as one of the greatest characters that the history of humanity furnishes.

Let us now go back and consider my trouble with the mischievous schoolboys. I had prayed over the matter several times—that is, after I had begun to *see* that I was getting into an unchristianlike frame of mind. I not only asked God's guidance but consulted my friend Rood because he was superintendent of the Sunday-school, and was universally recognized as a Christian man in that whole vicinity. My first impression was that the boys should be arrested for interfering. After friend Rood had declared that, if it were his case, he would leave the machine and "chase them down," I still felt uneasy and troubled about it. Had they been annoying other people in the same way it would have been a different thing; and when I asked the Lord on my knees, as I told you, if I should get out of the auto and go after the boys and get their names so I could make complaint, the answer came strong and clear, as I have told you. In other words, I could see while there on my knees that I should be out of place in any such proceedings, especially under the circumstances. Again I asked the question, or, if you choose, asked the Lord, to direct me in deciding whether I should report them to the sheriff, after I succeeded in getting their names; and the answer came as before, or, if you choose to put it differently, in that prayerful attitude where I was praying for the good of the boys as well as for myself it became *very clear* to my mind that I should be out of place or out of character, as the author of these Home papers, in reporting the boys to the police authorities, just because they annoyed *me* and nobody else. Good common sense seemed to declare that I had unconsciously gotten into a strife or quarrel with the schoolboys or the boys in the street.

Let me now tell you something that I did not tell you before. When they were annoying me by climbing on behind but not getting off when I ordered them off I decided I would get a yardstick which would enable me to reach them, and I actually went and bought one and laid it on the

seat; but before I had even flourished it toward them I asked the Lord if such a thing would have his approval. The answer came very plainly as before, and I never used the stick at all. I took it off the seat of the auto as soon as I got home. The answer came partly through a recollection of those precious and beautiful texts that I have already quoted: "Love ye your enemies; do good to them that hate you;" and "if thine enemy smite thee on one cheek, turn to him the other also." The implication would be that I should be forgetting my Christian character or standing, if I so much as even *flourished* the yardstick toward them. At every point I was handicapped—that is, handicapped so far as *striking back* was concerned; and I confess to you that it went awfully "agin the grain," as my poor friend Fred expressed it as we knelt together on the stone floor of the old Medina jail.

Many times our prayers are answered by not being answered at all; or let us put it this way: A child often asks for things that would do him harm. The wise parent refuses the request, and many times without explaining why. When Joseph was cast into the pit he no doubt prayed over the matter; and the same way when he was sold as a slave into Egypt; and again when he was cast into a dungeon for refusing to betray the sacred trust that had been conferred on him; and, if I am correct, he was something like *two years* in prison without any prospect, so far as he could see, that his prayers were answered or that his liberty would be granted. God saw fit to test his faith. In the same way Joseph seemed to his brethren hard and cruel; but he was only testing *them* and sifting them to see whether they had repented or reformed since he had lost sight of them. Although Paul had many wonderful answers to prayer, there was one thing he prayed about all his life, so far as we know; and yet his faith in the loving Father wavered not. God did not see fit to remove the thorn in the flesh, although he had, in answer to prayer, given him grace to bear it.

My good friend, I *have* asked the Lord repeatedly to guide me and to give me wisdom in regard to beekeeping, gardening, poultry, health, eating, etc.; and I would gladly submit the matter to the readers of GLEANINGS as to whether my prayers have been answered or not. The large circulation of our journal at present, the many kind words that come for my department, urging me to keep it up, is to me abundant proof that my prayers *have* not only been answered but are still being answered. I think you will agree with me that we have abun-

dant reason to thank God for the wonderful progress that is being made in the things you have mentioned, not forgetting temperance and religion; and my impression is that this progress has come largely in answer to earnest and faithful prayer. Not only is the Bible being read now in a way that it has not been before since the world began, but there are more people *praying* than ever before.

Our second text admonishes us that God prepares and plans his answers, even before the prayer is uttered. How do we know that God in his infinite love and goodness did not plan letting those boys full of mischief test my Christianity? One of the writers in the *Sunday School Times* suggests that, after we finish the study of the history of Joseph, we should take a birdseye view of the whole transaction. Sometimes in traveling we get to the summit of a hill where we can look back over the winding road that we have traveled over during the day. On the way to California you can many times look back and see how the railroad has twisted here and there in order to reach a certain point. Well, we want to take a birdseye view of that story of Joseph in the same way, and see the mysterious and crooked ways through which Joseph was led amid the perplexities and disappointments at the hands of his brothers, and yet which ended in placing him on the throne of Egypt beside Pharaoh himself as prime minister, and still later as the savior of the nation. Joseph *held fast* to the faith he had in God's many and gracious promises, and he had his reward.

Our last text contains another wonderful piece of information. In our prayer we should ask for that which we think we need and for that which is best for us. Jesus tells us to ask it in his name, and that is why we so often hear the expression at the close of a prayer, "in Jesus' name," etc. He says again, "Ask, and ye shall receive." This implies that, if the answer does not come all at once, as it does sometimes, by an enlightened conscience and intellect we know it *will* come eventually. Then he finished the sentence by saying, "That your joy may be full;" and I confess that I never *fully* realized what that means until this very moment. After having that wicked and spiteful spirit that I felt toward the boys who annoyed me—after having that bad spirit *banished* by prayer, I felt happy. And, my good friends, whenever any of you get to feeling spiteful and unpleasant toward your neighbors, prayer *will* dispel such feelings. Do you not agree with me? And when you are inclined to get into such a frame of mind again, just breathe this

little prayer to the dear Savior: "Create in me a clean heart, O God, and renew a right spirit within me." I told you about how my wife was startled because I laughed aloud when reading the Bible. I laughed because I felt satisfied that I had found a remedy for my troubles. When I came out ahead of the squash-bugs and saved my plants I no doubt laughed about it.

Let me now quote once more from the *Sunday School Times*. Please notice again the expression in our last text—"That your joy may be full." Wm. H. Ridgeway, in speaking about the joy of salvation, says:

"The joy of salvation." I would have no use for religion at all if there were not more fun in it than in any thing else on earth.

And I want to say amen to the above. True religion, which I have been trying in my feeble way to hold up before you, is actually more "fun" than any thing else.

FORTY YEARS WITH THE "LITTLE BUSY BEE."

The above heading was prompted by a trip I have just taken, June 17, out to one of our out-apiaries down on the river bottom, three or four miles away. Thanks to a kind Providence, honey is coming in very much as it did a year ago; and as a "gang" were going down to take off the first honey of the season I was asked to go along. In about half an hour's time our boys took off toward half a ton of honey, all from the upper stories, so there was no brood in any of the combs. Mr. Marchant, the foreman, opened the hives and lifted out the heavy well-filled combs while a boy drove the bees down with a smoker as much as possible. After Mr. Marchant had shaken off the bees in front of the hive an attendant who stood ready with a suitable brush brushed off all the remaining bees. The comb was then passed over to a fourth man, who placed it in an empty super. As soon as he received nine heavy combs they were carried directly to the auto truck until the load was made up. Then the truck was quickly run to the extracting-house at the Home of the Honeybees. You see the auto truck could be backed right up into the apiary close to where the men were working. It did not matter whether the air was full of flying bees or not. There were no horses to be stung. As the vehicle is equipped not only with rubber tires but steel springs, the load of honey was conveyed quickly and safely three miles or more away on the auto truck.

Forty years ago there were a good many jokes at my expense because of my enthusiasm for the future of bee culture. Our older readers will remember the picture I

gave of the hexagonal apiary.* By the way, that same apiary was a good deal on the plan of the modern "convergent poultry-yard." It was designed to save steps. You will recall that I had a picture of a little railway track and a car on this track to run up to the honey-house located in the center. This car was to carry the honey far enough from the extracting-house so it could be loaded on to a wagon without having the horses stung, etc.

Well, although I did have some wild visions in regard to the outcome of bee culture, I did not dream of an automobile for helping the beekeeper, for no such thing was then known or even dreamed of at that time. Perhaps I might remark that this is the first time we have gathered our honey from out-apiaries and brought it in on an auto truck. Heretofore we have carried the extractor around the apiaries and brought in the honey in cans; but you who have tried it know it is a big job to lug that extracting-outfit away out in the country and move it from one apiary to another. Ernest remarked this morning that he had been studying on the problem, and he was wondering whether the auto truck could not bring in the filled combs, and carry them back cheaper, rather than to carry a convenient extracting-outfit around to each apiary. When the extracting is done at the home or the center apiary we can use a gasoline-engine for power, which would be quite difficult if we had to move it around; and with this management we can have things fixed up in good shape for extracting, uncapping, etc. Of course, this necessitates having a set of empty combs; but this is an easy matter, especially when we extract only from upper stories and prevent the queen from having access to the combs above.

There is so much going on at the Home of the Honeybees just now that I feel sometimes like rubbing my eyes as did Rip Van Winkle, to be sure that I am awake. I suggested taking these heavy combs full of honey up to the honey and wax room, and have them do the extracting. Their force of women folks one would expect might be a little more tidy than a lot of men and boys. But what do you think was the reason given for not doing so? Why, just this: Orders are coming in so thick and fast for foundation that all hands have almost had to drop the work of honey and make foundation. Besides, there would not be any room there for the extracting business; and yet this wax and honey building covers a piece of ground 60 by 150 feet.

From the 50 colonies in that one apiary we took 1600 lbs. from our first extracting.

This result, 32 lbs. per colony, as early as the middle of June, is certainly pretty good.

May the Lord be praised for what I have been privileged to live and see accomplished with the honeybees.

High-pressure Gardening

THE DASHEEN, AND SOMETHING MORE ABOUT IT.

On page 240 you will find a glimpse of my Florida garden, and of the dasheens about three months after planting. The ground had been mostly cleared off after growing some other crop. Just over my left shoulder, if you look carefully, you will get a glimpse of our Golden Bantam sweet corn, which our neighbors write me is the best sweet corn they ever tested. I think the Golden Bantam is the most suitable for growing sweet corn in Florida in winter, because it is much hardier than the other varieties of sweet corn, and will stand the cold weather better.

Now in regard to the dasheen. Below is a clipping from the *Country Gentleman* for June 7. This same article contains a picture of dasheen shoots grown in a greenhouse in Michigan. Although I have not tested any of the shoots to be used like asparagus, I am fully satisfied they will be excellent food; for in hoeing about my plants I have occasionally chopped off a sprout with my hoe; and on chewing these white crisp shoots I have found them to be very rich and sweet, and almost exactly like raw asparagus. On page 240 of our issue for April 1 you will see there is a reference to the dasheen as a substitute for asparagus. It is somewhat surprising, at least to me, that none of our great seedsmen have not as yet taken hold of the dasheen and exploited it as they usually do new vegetables. The dasheen, like the calla lily, wants a very rich soil with a great abundance of humus and plenty of water; and wherever things are favorable I am told they frequently grow as high as a man's head.

A great deal has been written about the dasheen—that new root crop for the South. Now it appears that more will be written, and for good reason.

It is generally known that the dasheen has all the goodness of the common spud, with even greater food value; that the tubers can be baked, French fried, mashed, croquetted, and used for stuffing roasts. It is also generally known that a good flour is being manufactured from the dasheen; that the leaves of the plant make an excellent substitute for spinach and other greens; that plantings have yielded as high as 400 bushels of tubers to the acre.

That should be enough for any plant that has been experimented with in this country for only five or six years. But now the dasheen has added yet another chapter to its catalog of possibilities. The shoots of the plant have been tried out as a food,

and they have filled the bill to the satisfaction of all who have taken a hand in the experiment.

Ordinarily the shoots that eventually bear the big "elephant-ear" leaves are green and far from tempting. Perhaps they would never serve as a human food if they were experimented with in the natural green condition.

But recently the Division of Foreign Seed and Plant Introduction of the United States Department of Agriculture secured the co-operation of a man in Michigan and had him box in the growing dasheens so that light would be excluded from the stems. The result was a complete bleaching of these, and a product more tender and tempting than was hoped for.

The bleached stems were cut, packed, and shipped to Washington. David Fairchild, agricultural explorer for this division of the department, had them cooked, and served at a banquet. He took a long chance, for he didn't believe in trying out this experiment on the "dog." Well, the dasheen sprouts tasted good—something like asparagus—and were served like asparagus. Everybody liked them. And now Mr. Fairchild and the rest of his force are going in for a more thorough investigation of this new dasheen.

These shoots—or, rather, the dasheen plantings—were forced in a greenhouse. It was found that several crops could be grown in a season. Of course it is possible that such a process of growing this new food would not pay; but Mr. Fairchild and his corps feel that the same results will eventually be secured in the field, earth banking taking the place of boxing to effect the bleaching.

DASHEEN FLOUR—SEE A. I. ROOT'S SPECIAL NOTICES FOR JUNE 15.

The dasheen flour mentioned in our last issue was finally forwarded from Bradenton, Fla. The Department at Washington informed me that they have no more to send out this season. Well, while we are well pleased with the dasheen flour for cooking purposes I am not prepared at present to speak so extravagantly in regard to it as I did of the first baked dasheen tubers last January. Let me explain.

I got my first bag of dasheens on Christmas eve, as you will remember; and some time in March I secured five bushels from the Development Co. at Brookville, Fla. Now, these last five bushels were already sprouted more or less, and some of them were wilted somewhat. We all know that a sprouted and soft Irish potato late in the spring is not expected to be of first quality for table use, and it was so with the samples selected from the five bushels I bought. They were nothing near equal to the first one, which was hard and firm and solid. Well, this dasheen flour tasted a little like the wilted dasheens when cooked. We have tried them for making biscuit with

half white flour, also for making cookies. We passed them around the neighborhood, and they all voted them fine—better than biscuits and cookies made entirely of wheat flour. But the best results were attained with pancakes of one-fourth graham flour and three-fourths of dasheen flour. These, with maple molasses, were certainly delicious.

Will dasheen flour ever be a successful rival to common wheat flour? It looks to me quite likely; for I believe it is certainly a more nourishing food if possible. Then consider that 50 bushels per acre is a big crop of wheat, and few farmers come up to that. But the dasheen has been made to yield at the rate of 500 to 800 bushels.

Here is another one of my "happy surprises." The Department at Washington has just put out a very pretty bulletin of twelve pages entitled "The Dasheen, a Root Crop for the Southern States." It contains two pictures of the growing crop and a very nice picture of the tubers. From this bulletin I make the following extract:

The nutty flavor of the tubers gives them a peculiar palatability which has struck the fancy of a large number of persons. The higher nitrogenous and starchy character gives them an advantage as food that would seem to make the plant, when compared with the potato, an even more valuable food-producer.

RECIPES FOR THE PREPARATION OF THE DASHEEN.

This vegetable is a staple article of food for millions of people in tropical and subtropical countries. In general it is used in the different ways in which the white potato is used. It may also be candied like the sweet potato. The flesh of the corms and large tubers is frequently somewhat gray or violet when cooked, but this does not affect the flavor.

When uncooked dasheens are being scraped or pared they should be handled in water to which a teaspoonful of sal soda to the quart has been added, in order to prevent irritation to the hands.

BAKED DASHEENS.

Dasheens, large or small, may be baked like potatoes, in a quick oven. They should first be washed and scrubbed to remove the fibrous part of the skin. When practicable to do so it is often desirable to scrape the dasheens before baking, as they are then more convenient for eating, and the soft crust which forms when they are properly baked is particularly delicious. The corms may be cut in half from top to base in order to lessen the time needed for baking. The time required is about the same as for potatoes of the same size. They should be served hot. Season with salt and plenty of butter, and pepper if desired. Gravy instead of butter may be used.

The dasheen when properly baked and served is mealy, and the flavor is much like that of the white potato, but more or less suggestive of chestnuts. If not overbaked, the skin when properly scrubbed or scraped beforehand will be found of delicious flavor. As the dasheen is drier than the potato it requires more butter.

Additional copies of this publication may be procured from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5 cts. per copy.

The dasheen is used in enormous quantities in Cuba, where it is known by the Spanish name of malanga.

THE HIGH COST OF LIVING; HOW OUR MISSIONARIES MAY HELP TO REDUCE IT.

Friend Root:—I presume you will not remember meeting me in Medina some ten or twelve years ago; but knowing that you are interested in our work, and have taken a part in it, I think I may venture to address you as above. It was through your kindness in sending me a letter of introduction to the Wright Brothers, while I was at home on furlough year before last, that I met Mr. Orville Wright (also father and sister), and saw him fly. The fact that *GLEANINGS* has been coming to me for years I take to be a substantial proof of the A. I. Root Company's interest in foreign missions in general and in our mission in particular. I have read your department with much interest and pleasure; and seeing your interest in every good work I can only regard you as one of our number—a missionary. I have often felt like writing you after reading your kind and helpful messages, but have felt that it would not be wise to impose on your time; but upon reading what you say about the "dasheen" in *GLEANINGS* for March 1, 1913, and noticing that I am left out of your proposal to send a "dasheen tuber to every reader of *GLEANINGS*—that is, to every one who sends the subscription price for one year," since I receive it free, I have decided to write to see if I can not arrange to receive a tuber *also*.

Now, I suppose we must have something like the "dasheen," only we know it by the name "amadumbe." There are several varieties here—some very large, but almost worthless; others smaller, and highly esteemed as food. By the time this reaches you and I can receive a reply from you, our amadumbe will be about ripe, I think, and it will also be a favorable time for sending them so far by post. Now, if you would like to try some of our best variety of amadumbe, and compare them with the dasheen, and will so notify me, I will endeavor to send you a sample packet registered. We also have very nice sweet potatoes here. One variety we prize higher than the others, because of its very vigorous and quick growth combined with excellent eating qualities. It is quite the opposite of "vineless," but my experience has been the less vine the less vigor. If you would like a sample of these also, I will send them. Now, if in exchange for the above-mentioned samples you are willing to put me on the list of recipients of one of the Trinidad dasheen tubers (I should like to see how it compares with our amadumbe), I shall be pleased; otherwise I think I shall have to send my subscription to *GLEANINGS*.

I, too, enjoy hunting up "God's gifts."

I am addressing you at Medina, as this will reach you in summer; but presume the samples should go to your Florida address.

W. L. THOMPSON, M. D.

Mount Silinda, Melsetter, Rhodesia, South Africa, April 25, 1913.

My good friend, I was not only delighted to receive your kind words and your offer to take me among you as a "missionary," but I am grateful to you for the opportunity of testing some of God's gifts that come 'way off from South Africa. I presume likely my Florida home will be the place to test them; but I am so anxious to get hold of the tubers, both amadumbe and sweet potato, that I wish you would send me a very small package here, Medina, and a larger one in time to reach me at my Florida home some time in November; and if you will tell what the postage will be I will remit that also. I should like a good-sized package sent to Florida. I will see

that you get a small "bagful" of dasheens. Your kind offer is one of my "happy surprises," and I am also happy to think that our missionary friends can help reduce "the high cost of living."

GETTING RID OF VERMIN; MOTH-BALLS FOR SQUASH BUGS, ETC.

One of our new poultry-books recommends naphthalene flakes dissolved in kerosene as one of the most efficient remedies for all kinds of vermin about the poultry-house; but although I did not find any naphthalene flakes at either of our Bradenton drugstores, I overheard the proprietor telling the clerk that *moth-balls* owe their virtue to these same flakes. As they cost only 10 cts. per lb., and are so light, you get a big lot in a pound; we use quite a few of them, and they seem to banish all sorts of moth and other insect pests. Now, here is a clipping that indicates a quick and efficient remedy for bugs that infest cucumber and squash vines. I give it to you before trying it, for I feel sure it will do the business, and probably this will hit many of you just about the time the bugs are the worst.

MOTH-BALLS FOR CUCUMBER-BUGS.

Perhaps no reader of *The National Stockman and Farmer* has escaped the depredations of the little striped beetle. Many have become so discouraged by its ravages that they have quit trying to raise melons and "cukes." I have farmed and gardened in several States, and have had all kinds of trouble along this line. Seeds would germinate, plants would start nicely, and just about the time I would think that all danger was past these little pests would descend upon my plants and utter destruction would follow in their wake. I tried every thing I had ever heard of to prevent this destruction, but with only partial results. Soot, ashes, lime, tobacco dust, ammonia, etc., were all given a thorough trial; but never did I find any thing which gave assurance of success until I tried the "moth-balls" or "camphor balls," as they are called. When I plant my "cukes" or melons I place three or four of these balls in and around each hill, pressing them into the ground slightly so that they will not roll around. If these disappear before the vines are past danger I replace them with others until I am certain that all danger is past. Do not allow them to touch the plants while they are young and tender, as they may do some damage. This is a simple, cheap, and effective way to avoid damage from these little striped pests. I have used it for a number of years, and have recommended it to many others, and always with success.

A. L. GEFORD.

Later.—One of the poultry booklets suggests that 2 lbs. of pulverized moth-balls stirred into a gallon of crude carbolic acid, before you use it for painting the nest-boxes, roosting-poles, etc., will make it very much more effective and lasting.

Temperance

"Lord, now indeed I find
Thy power, and thine alone,
Can change the leper's spots
And melt the heart of stone."

Some years ago I mentioned in these pages an address delivered by the mayor of Barnesville, Ohio, before a convention of the Anti-saloon League at Columbus, Ohio. Barnesville was a wet town; and, if I remember correctly, it was very wet, and consequently it was a nest of gamblers. The people, however, put in a good man for mayor, and they were lucky in having a temperance man who was not afraid, and who was about as much a born fighter as some of the gamblers. He undertook to enforce the law and to put the saloons out of business. But some of the wets clubbed together and defied the law. Mayor White had them arrested and fined. But they paid the fine and went at it again. One particularly desperate character locked the doors against the law-enforcement committee and declared that he would shoot any man who would come on his premises. The mayor had him arrested and fined; but he had able counsel, and escaped the clutches of the law, just as we have seen it done in times past. Now, this happened so long ago that I can

not remember all the particulars, but I give what I can remember, subject to correction.

This desperate character put up a sort of saloon barricade made of railroad ties, and he had it ironed off so it required some big stout men with suitable tools to break in and arrest him. I think he passed the drink through a small hole in that barricade, and the money was passed through in the same way. Mayor White sent word to the man that he would have to submit, no matter what it cost. If I am correct, he was once fined \$800 and at another time \$1200. After paying the \$1200 fine he told the mayor if he would let up on imprisonment he would quit the business and go to some other town. He said he had a chance to sell out. The mayor inquired who was the purchaser; and when informed it was another desperate character he refused, and said something like this:

"Mr. DePew, if you will sell your place at a reasonable price to a man who wants to run a grocery on the premises we will let you off."

He accepted the offer, and left the town. He went to Cambridge and carried on the same business for years. Most of our Ohio

friends know something about Cambridge. Well, Mayor White, better known as the Barnesville mayor, gave a talk here under the auspices of the Anti-saloon League two or three weeks ago. Toward the close of his lecture he said something like this:

"My good friends, I have lately received a love-letter that I wish to read to you. I know it is not considered as a general thing good taste to read *love-letters* in public. But as I feel sure the writer will have no objection I take the liberty."

He then briefly narrated what I have mentioned above, and here is the "love-letter:"

Cambridge, Ohio, March 12, 1912.

MR. JAS. A. WHITE, Columbus, Ohio.

Dear Sir and Brother:—Yours of the 8th received, and I must say that I was somewhat surprised to hear from you. Yes, I did join the church, and I think it the grandest thing I have ever done. See here, old pal, I want to say to you that I went into this proposition with my eyes open. I don't intend to try to cheat God's law as I have the State and United States law, as you so well know.

I went into this with the intention of giving up my former business, also gambling, and, in fact, every thing I should not do, and I guess I have done a little of every thing most; but it is not what I have done: it is what I do from now on.

Well, Jim, I can say this much: I don't know of a person in this world toward whom I feel the least bit of spite. That is saying something for me, being the kind of a rounnder I was, as I have seen as much of the wicked part as any one of my age. The reward is too great to take a chance. Well, Jim, if I only fight as hard for God as I did for Satan I surely can do some good in this world yet. Well, I hope and pray as I go down the straight and narrow path that I may not vary out of it much. God knows what my outcome will be. I am willing to trust him. He knows I came to him on the square. With best wishes for your success I am

Yours very respectfully,
JOHN E. DEPEW.

Who, do you suppose, wrote that letter? The very man who threatened to shoot the mayor in years gone by, when the mayor's best friends really feared he *would* be shot if he kept on with his determined law enforcement. After the lecture I begged for a copy of the love-letter; and I also asked Bro. White what brought about the conversion of his old friend. He said it was through a series of meetings by evangelist Lyon. Just about that time I noticed in the papers that Mr. Lyon was having a revival at Fairmont, W. Va., where it was reported there were over 2000 conversions. A few days ago I saw another account where the number of conversions in that one town or city had reached quite a little over 3000.*

* Over 3000 converts in one fair-sized town or city! What are we coming to? When we read of grafting, dynamiting, and horrible murders, we sometimes lift our hands in horror and say, "What are we (the world) coming to?" Well, may the Lord be praised for the fact that the world is already coming to something else as well as to wickedness and sin. The world is "coming to" the Lord Jesus Christ, and to repentance and the new birth, like the poor penitent saloon-keeper and gaun-

Now, it is not at all likely that Mr. Lyon in his earnest work has *many* such conversations as that of the Cambridge saloon-keeper; but only God knows the number of bad and wicked men who have been changed over—born again. May God be praised for evangelist Lyon, Billy Sunday, Bederwood, and perhaps several others who are now attracting the attention of the whole wide world by their crusade for Jesus Christ. No wonder the brewers and saloon-keepers try to prejudice people against him.

I wish to call attention to the last sentence in that touching letter: "He knows I came to him on the square."

Here is a brief footnote from James A. White in regard to the letter furnished me:

John E. DePew was formerly engaged in the saloon business at Barnesville, O. James A. White was formerly mayor of that city; and, after the saloons were voted out, fined DePew for violating the dry law. The said DePew finally concluded to go to Cambridge, O., and did so, and was arrested there for violating the law; but during the revival services conducted by Rev. Mr. Lyon in the city of Cambridge last winter Mr. DePew was converted and joined the church. Mr. White, hearing of it, wrote him a congratulatory letter and received the above in reply.

May God be praised for such men as the "mayor of Barnesville" as well as for evangelist Lyon. Bro. White told me that for some little time after he heard of DePew's conversion he hesitated about writing to him, fearing that DePew might not feel very friendly toward him, even after he had come out among the converts; and this brought out the letter given above.

ANOTHER TESTIMONIAL FOR "PEACH JUICE."

Our good friend W. J. Bryan's hobby seems to be grape juice, or at least the papers accord him the credit of being the great "grape-juice man." Well, we have good reason to thank God that there is at least *one* man who stands away up in the affairs of this government who not only *drinks* grape juice but is not ashamed to offer it to the great dignitaries from foreign lands. Well, now for my little story.

Years ago, when Mrs. Root's only sister was a frail little chick lying in her cradle, the doctor feared she would not live long. In fact, I do not know but they had given her up. While the anxious father stood watching her feeble breath, he remembered a peach-tree out in the yard that was loaded with luscious fruit dead ripe, and he wondered if some of that fresh peach juice would not coax back the fluttering breath. He squeezed some of the juice into a teaspoon. She took it with relish, and wanted

bler who wrote that plaintive letter. May God sustain him in his efforts to bless instead of curse humanity.

more; and he fed her on peach juice till she got well and strong. The doctor said he did not *think* it would do her any harm; and as they said they had tried every thing else he did not make any objection. She gradually picked up, and lived to a pretty fair old age. I wonder if peach juice would not be a good thing for babies *now* in place of soothing-syrups and similar concoctions. May be it would be a good thing too for some other folks who are trying to break off from bad habits. Thank the Lord for peaches, and especially for the California *evaporated* peaches of the present day that afford us the means of having delicious "uncooked" peach juice every day in the year.

THE MILLENNIUM COMING—MORE EVIDENCES OF IT.

It is a fine thing to be able to catch a glimpse of the good there is in this world of ours, as well as to recognize and give due attention to the evil that is constantly cropping out. I have been for years past hoping and praying for clean men in the high places of our government. I rejoiced and thanked God when President Taft said, "I do not drink;" and I was glad to hear Roosevelt come out before the world only a few days ago and say, "I neither use tobacco nor drink beer." Of course he gave as a reason that he did not *like* either; but, oh how I did long to have him drop just a word in regard to the example that our presidents and other men in high places set before the boys—especially the little boys in this land of ours. I rejoiced and thanked God when Secretary Bryan passed around the "grape juice" to the foreign dignitaries, and gave his reasons for so doing. I rejoiced again when our good President not only indorsed Bryan but banished liquors from the White House. My last rejoicing was when I read the following clipping from the Cleveland *Plain Dealer* in regard to Vice-president Marshall:

HAS HOE-CAKE AND MILK; VICE-PRESIDENT MARSHALL BELIEVES IN SIMPLE DIET.

A slice of old-fashioned "hoe-cake" and a generous glass of creamy milk is the lunch upon which Vice-president Marshall subsists 365 days of the year.

The Vice-president has a theory that a simple diet is a builder of happiness. Recently he said in a private conversation that the United States would be a nation of happy men and women if a less complicated diet came into fashion.

"It is not that Americans are gluttons," he said, "but they want an infinite variety in their food. The American palate has lost its taste for the plain cooking of our forefathers, and longs for French messes."

Amen to Bro. Marshall's timely rebuke to the women who spend their lives and take so much pains in tempting us men folks to eat more than is good for us. May God hasten the day when more of us can make

out at least one meal out of the three with hoe-cake and milk. Now, will some good friend who sees this tell me where Bro. Marshall gets his hoe-cake? Can it be bought at the bakeries, or must it be baked on a hoe? In other words, what is this hoe-cake that Vice-president Marshall eats at least once every day in the year? We can get a glass of "creamy milk"—or at least most of us can—without very much trouble, thanks to the recent fashion of drinking milk instead of beer. Now give us the hoe-cake, or tell us where we can get it "pure and unadulterated."

SPELLING "CIGARET."

'Tis only a word, but one you've oft heard;
We call it a cigaret;
I'll spell it, so that, hearing, you'll know,
And, knowing, you will not forget.

There's C for the cad it makes of the lad
Who twirls in his fingers the bit
Of a paper rolled up (a tobacco-filled cup),
And thinks he's a man when it's lit.

Then I is for imprints of stains;
And the dark hints of shadows lie under his
eyes;
For once he starts smoking it comes far from
joking—
It's leading to swearing and lies.

G is for gladness cigarettes turn to sadness
When once they have gotten their grip;
Their kisses leave trains of yellow dark stains—
To remind him on fingers and lip.

Allurements for A—temptations so gay
Beckon with jewels and wine;
He finds out at last that it may be all brass
As well as the gold that will shine.

Then reckless for R, and the reason they mar
The rugged good health he has lost;
"Oh, why? and oh, why?" says the lad with a sigh,
"Did I never quite reckon the cost?"

E is for ease, and the "do as you please,"
The attitude bold he assumes;
He's getting more lazy, his mind is more hazy,
The more "coffin-nails" he consumes.

Next T is for times he has wasted his dimes
On parcels of paper and weeds;
Oh! little he thought, when the first one he bought,
That trouble was planting the seeds.

So now you may see what the small word can be
When each of its letters you spell;
It's letters are few, 'tis a small word, 'tis true,
Till some of its meanings you tell.

Gladwin, Mich.

MRS. HUBER SOPER.

ANOTHER KIND WORD FOR TERRY'S BOOK.

I enclose \$1.50 for GLEANINGS and Terry's book, "How to Keep Well and Live Long." I have already had two. One I gave to a friend who liked it so well she gave it to a friend and bought one for herself. The other I have not seen since last June. It has been lost so much I have lost track of it, and do not expect to see it again; but I want one for myself. I expect to take GLEANINGS as long as I live and can see to read, or as long as A. I. Root writes for it, or Dr. Miller.

EVA M. CLEVELAND.
East Cleveland, Ohio, April 14.

Health Notes

POSTUM CEREAL, WHEAT COFFEE, AND SOME OTHER THINGS.

Years ago I became satisfied that coffee was injurious. I tested it repeatedly on myself, and watched its effects upon others; and when I noticed how the habit seemed to be growing, and saw statistics in regard to the amount of money paid for coffee, not only throughout the United States but perhaps almost all over the world, and oftentimes paid by poor people who had hard work to make ends meet, it seemed to me a very sad condition of affairs. As the years passed, and I saw the habit of drinking coffee growing instead of lessening, I wondered if any thing could be done to stop it. Now, in view of the above it seemed almost funny—yes, I might almost say a big joke—to find a man who has gotten rich—yes, become a millionaire, and, for all I know, a multi-millionaire—protesting and teaching and *preaching* about the harmfulness of coffee! I remember Post when he first started out with his postum cereal and grapanuts. In fact, I was one of the first to get his substitute for coffee and give it a pretty good test to see how much truth there was in his claims; and I have smiled and felt happy as the years have gone by to see what a tremendous business he has been building up in getting people to give up things that are hurtful and harmful. Very likely there is some exaggeration in the letters he has published; but notwithstanding I believe that Post has been one of the great reformers of the age; in fact, he has been doing a great missionary work in his own way, and getting big pay for it.

You might imagine from what I have said above that Post has given me "big pay" for writing up his products, and you might expect that a big glaring advertisement might come out in *GLEANINGS* very soon. I want to tell you, my good friends, that Post, for some reason or other, has never seen fit to patronize *GLEANINGS* by giving us even a single line of his advertising. Perhaps if somebody should call his attention to the above he might send us a "good slice" of his advertising business—that is, if he didn't read further and see what I am *now* going to say. Notwithstanding I honestly believe all the above is true, at the same time I want to call the attention of our readers to the fact that it is a tremendous waste of money to buy postum cereal instead of making the wheat coffee that our good friend Terry has advised and directed how to do so many times in the two or three years that have passed.

Grapanuts has proved a very good and agreeable food in our home. We have used it more or less ever since Post gave it to the world. I think he has done good with the grapanuts as well as the postum cereal, even if he has had big pay for his missionary efforts. If he would only come down on his prices to half, or a good deal less than half, he might still make money and do good. I think I am safe in saying this, for I believe that Terry's wheat coffee is every bit as wholesome and good as the postum cereal. I am all the while getting so many letters in regard to wheat coffee, and so many inquiries, I think I can tell you best all I know about it by giving an extract from a recent number of *The Practical Farmer*. Here it is:

A CHEAP, WHOLESOME BREAKFAST DRINK.

Our women readers can save quite a little money by following advice given here. And that means more money for other comforts. There is a continual call for directions for making our wheat "coffee." So we give them again. I have just roasted enough at one time to last several months. I use plump cleaned wheat, same as we grind for graham flour. Make a hot fire in the cook stove or range. Roast in iron dripping-pans, the wheat about one inch deep. Fill the oven full. When the wheat gets dry and hot you will need to stir it with a large iron spoon once a minute, more or less, to prevent its burning. It should be roasted very brown, but not burned any, if you can possibly avoid it. Smoke indicates that it is burning. I bought extra dripping-pans so I could roast considerable at once. They cost but little. One should put an even number of pints of wheat in each pan, say two or three, no fractions, for convenience when adding molasses. When the wheat is thoroughly roasted add 3 tablespoonfuls of New Orleans molasses to each quart of wheat. Then roast 10 or 15 minutes longer, but with less fire, as it burns easier after the molasses is put in. When done, empty each dripping-pan into a large pan that will hold all you have. Stir and mash with a large spoon to prevent its caking as it cools. One is not likely to get every panful roasted the same, and this mixing makes the quality even. We used to put in butter to prevent its sticking together; but this stirring as it cools answers as well, and the wheat keeps better. When cold, seal up in glass fruit-jars and store where it is dark and cool. Grind each morning fresh, and boil about 20 minutes. Two teaspoonfuls make four cups as strong as we like. You will soon like it as well as any coffee, and it is free from poison. Let the children have it. If it is not as dark-colored as coffee, and good flavor, you did not roast it enough. Of course, you can buy a cereal drink in paper boxes at a cost of 10 to 20 cents a pound, but we do not think any of them as good as ours, which costs about 3 cents. We do not tire of it, year after year. I really like it as well as cereal coffee—quite a little money saved.

Now, after you have read the above I want to tell you that our next-door neighbor, a Mr. Ault, who has just come from Colorado and settled down here in Florida (a beekeeper, too, of no small experience), has brought along with him some very nice

plump Colorado wheat—about fifty bushels. As soon as we Florida folks found it was for sale, and also that it was so much nicer than any we get in our market here for the chickens, we very soon relieved him of all he had to sell. Well, now we have taken some of this wheat and ground it in that little hand mill that I described so many times, and we have the most luscious graham bread that I ever ate in my life. And after the flour is sifted out for the graham, Mrs. Root boils the coarser wheat three or four hours, or all the forenoon. Now, this wheat mush, when it becomes cold, is sliced up and put into the oven just before breakfast or dinner until it is nicely warmed up and a sort of jelly formed over the outside. A slice of this nice wheat mush, nicely buttered over, is the finest cereal of any thing I have *ever tasted* in my life. If you want to get a dish that is fit for a king, as Ernest expresses it, add a little honey after it is well buttered. I do not very often use the honey, because I have to be a little careful about too much sweet of any kind. Right beside your plate you want a glass of rich milk. Take a sip of the milk as you chew the wheat thoroughly—mush and milk literally. I want to add that we have the finest milk down here in Florida that we ever had in our lives, from neighbor Rood's Jersey cows, and he does not have to *buy hay* either. He grows every bit of the hay he uses for his horses and cattle on his own place. We have just one pint of this Jersey milk a day (and it is a good *generous* pint), but this milk not only furnishes all the milk we use, but Mrs. Root skims off the cream and often makes quite a little butter, and this cream she gets into butter in less than five minutes.

THE PATENT-MEDICINE BUSINESS; THE STAND SEARS, ROEBUCK & CO. HAVE TAKEN.

We clip the following from a leaflet just sent us:

WHY WE HAVE DISCONTINUED PATENT MEDICINES.

Many of our customers will be surprised and possibly some of them disappointed, to find that this catalog no longer lists the various patent medicines we have carried in the past. Our decision to discontinue the sale of patent medicines was made after careful study of the question from all sides, and is based on our policy of handling only dependable merchandise—merchandise that we believe will give the service our customers have a right to expect. We have come to believe that patent medicines do not conform to this standard; in fact, we are confident that those of our customers who have investigated the matter thoroughly will agree with us that, considered in all its phases, the patent-medicine business is a public evil.

We are not prepared to take the extreme position that no medicines of any kind, regardless of how simple or in what manner advertised, should be offered direct to the public. However, even such a

state of things might easily be better than the present situation, in which we find valueless and even dangerous medicines offered to the public through the medium of advertising that is extravagant, misleading, and deceptive—advertising calculated to deceive the well into the belief that they are sick, and to induce the sick to pin their faith to ineffectual means for recovery.

Practically every patent medicine is put out under a trade-mark name and secret formula. The fact that the name is private property makes advertising profitable where otherwise it would not be. Secrecy permits advertisement of the most extravagant sort to go more or less unchallenged. It is not unusual to find a patent-medicine advertisement that tends to leave the impression that there is a "mysterious something" about the medicine that is sufficient to account for the otherwise unbelievable virtues attributed to it. In selling patent medicines the tendency is to tell as little about their composition and to claim as much for them as the law will allow.

That patent medicines are more than likely to be disappointing as well as dangerous is apparent when we consider the fact that the all-important as well as the most difficult thing in the treatment of disease is that of finding the real underlying cause of the trouble, and the further fact that the person least able to form a safe judgment in this matter is the patient himself.

The person who falls a victim to the advertisement that attaches a grave meaning to every little ache or pain, when in reality nothing ails him that forgetting would not cure, is at least defrauded.

The person who depends on an advertised nostrum to cure a serious ailment which, to be successfully treated, must have only the most prompt and skillful attention, is throwing away valuable time. The most dangerous medicine, especially in the case of the lingering disease that drugs alone can not cure, is that which, by containing a stimulant or an opiate, causes its victim to feel better for a while. Being thus encouraged in a vain hope, though all this time the lurking disease is steadily progressing, he often turns too late, if he turns at all, to rational means for recovery.

INSANITY AND ITS RELATION TO INTEMPERANCE.

We clip the following from the *Sunday School Times* for June 7:

WHY INSANITY DISAPPEARED.

In ninety-seven of the counties of Kansas there are no insane, in eight-five counties no feeble-minded, in fifty-seven no paupers. It can not be accident that has sent the germ plasm of insanity skipping out of Kansas. It is obviously and unmistakably due to the enforcement of prohibition and the consequent decrease of the neuropathic taint.—DR. MARY WOLFE, University of Michigan, in *Philadelphia North American*.

My friends, how are insanity, feeble-mindedness, and pauperism in your county? I am ashamed to say that our own county of Medina, here in Ohio, is nowhere near what is reported above in "prohibition Kansas." How is it possible for any sane man or woman to vote wet when wet votes mean, *without question*, insanity, feeble-mindedness, and pauperism?

The A. I. Root Co.—Please discontinue my ad. as I no longer can care for orders.

ROBT BIRD, Pinckneyville, Ill.